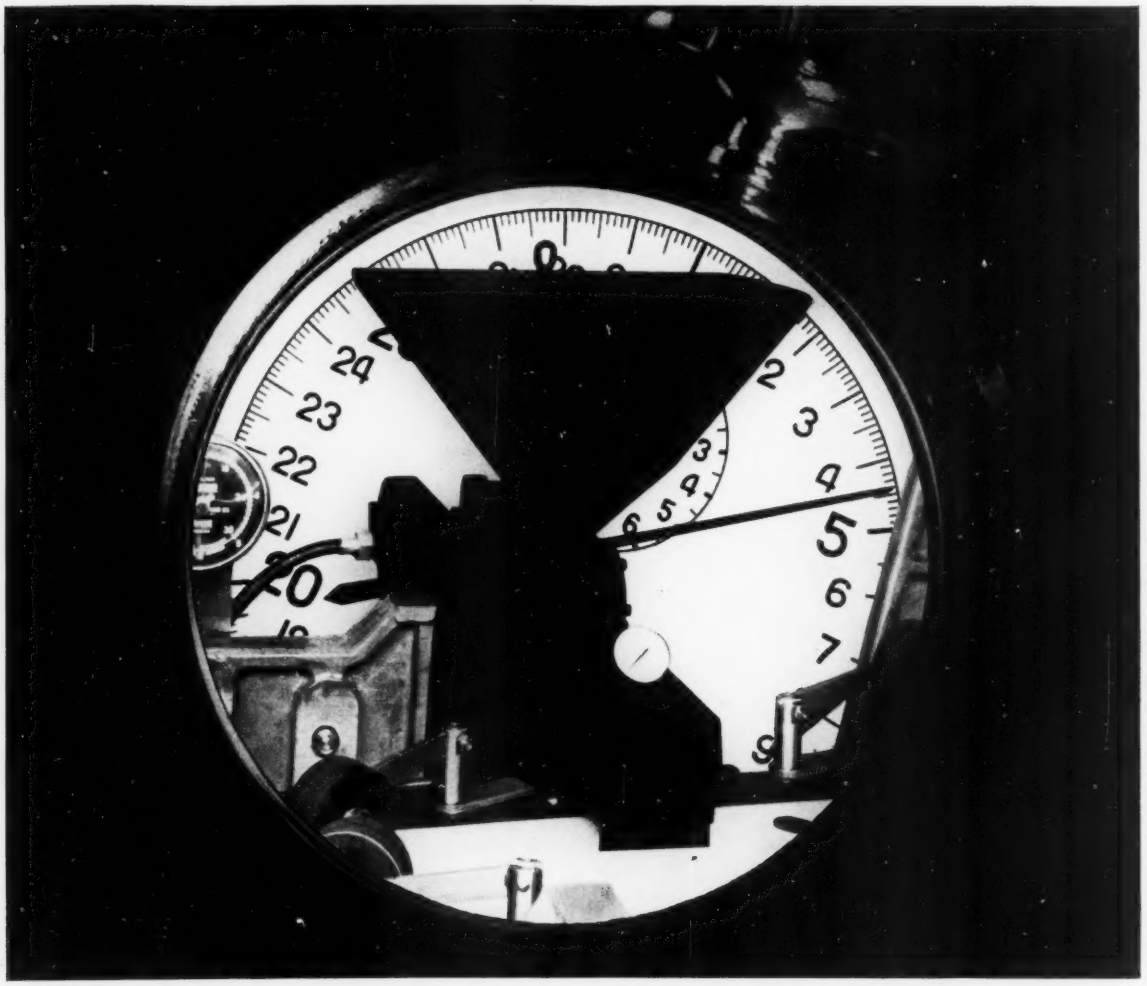
MODERN PACK
Spring Kist
SUCCESS STORY:
Spring
Background
World Report
Cost Cutters
COMPLETE CONTENTS

INSTANT-LOK

GRANULAR HOT MELT SYSTEM



INSTANT BONDS ON TOUGH SURFACES

You name it! Polyethylene, wax paper, foil, wet strength kraft, Saran—National's INSTANT-LOK SYSTEM bonds them all, *instantly*.

The INSTANT-LOK SYSTEM consists of granular, 100% solids resin adhesive melted and extruded through the applicator pictured above. A thin, instant bonding glue line results. Instant-Lok applicators are available exclusively through National.

The INSTANT-LOK SYSTEM offers the lowest cost form of adhesive. No water. No preparation. A range of formulations give high bonding strength, heat and oil resistance, and other desirable properties.

The INSTANT-LOK SYSTEM is suggested for bag seaming, carton sealing and forming, tube winding, and other converting operations. It can be adapted to machines you are now using or specified on new machines. Write or call your nearest National office for full details.

National ADHESIVES

NATIONAL STARCH and CHEMICAL CORPORATION

750 Third Avenue, New York 17 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

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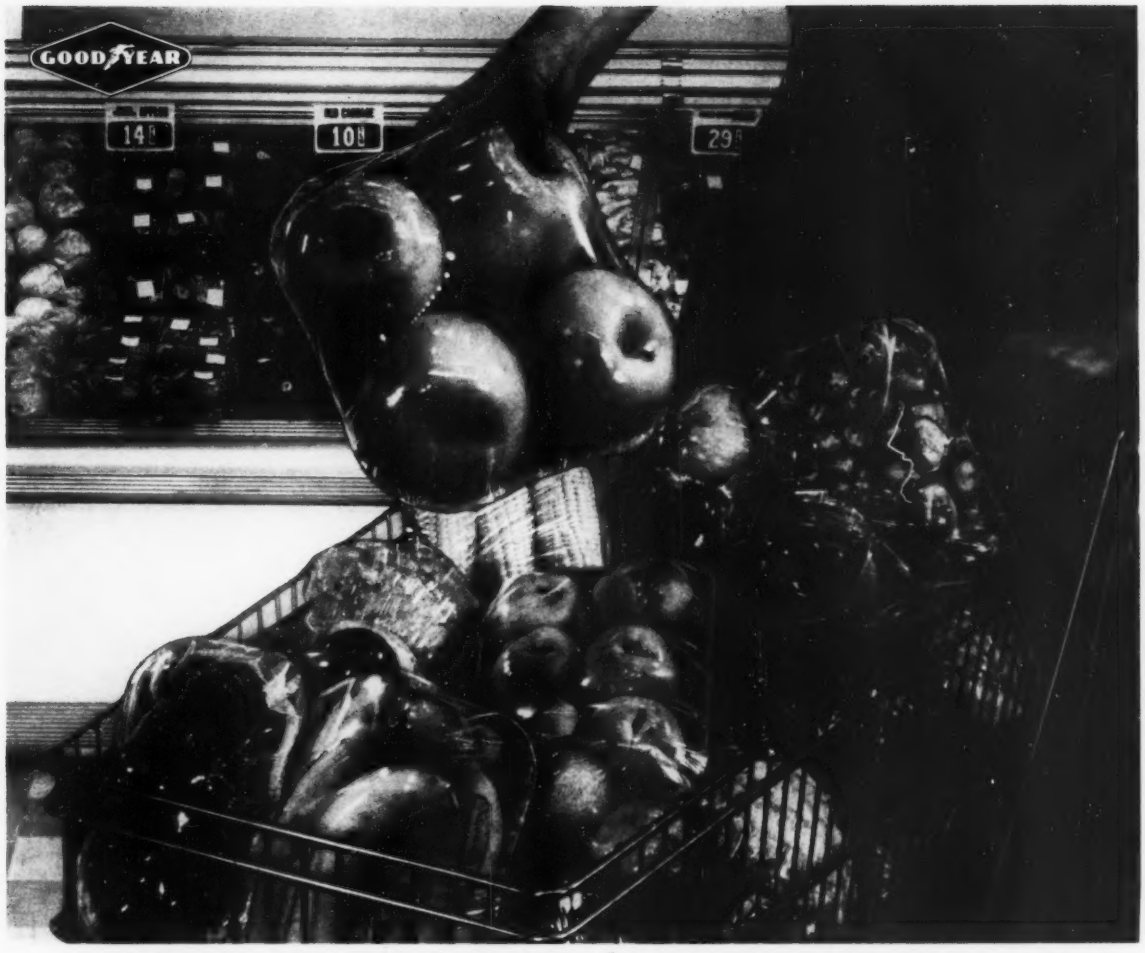

Waste and spoilage reduced 24%...

And sales are way up! That's the report from Liberty Super Market in Birmingham, Alabama. No wonder *machine* prepackaging of produce in 75 PW VITAFILM is planned for their other stores.

Management also reports that VITAFILM wrapped produce moves as quickly and easily as prepackaged meats. It encourages larger unit sales, speeds shopping, eliminates the weigh-up line and the weighers.

All produce here is wrapped swiftly and efficiently with automatic packaging machinery, on which VITAFILM works especially well. Result: labor costs kept to a minimum.

For help in applying VITAFILM benefits to your operation, for machine or hand wrapping, write Goodyear, Packaging Films Dept. C-6418, Akron 16, Ohio. Lots of good things come from Goodyear.

THE WRAP-UP ON THE STORY
VITAFILM is a star performer on this high-speed machine — the Model U6 by Package Machinery Co.

75 PW VITAFILM BY GOODYEAR

Vitafilm, a polyvinyl chloride—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

IN THIS ISSUE OF MODERN

MARCH 1961 / VOLUME 34 / NO. 7

83 **Packaging a la carte**
As surely as it turned the corner grocery into the supermarket, packaging is revolutionizing back-scene operations in the $17-billion restaurant industry. Heat-and-eat and other forms of convenience food packaging are becoming vitally important to local diners and de luxe hotels alike. Keen brand rivalry is providing packaging that pares costs with portion control and labor-saving short cuts. But food-service operators say the packaging job can be improved.
General interest.

89 **Food Law seeks an 'open end'**
Faced with an "inflexible" March 6 deadline and with a mountain of unfinished work, Food & Drug Administration appeals to Congress for a law that would extend indefinitely its time for clearing packaging-additive petitions. As of mid-February, there were hundreds of petitions on major packaging materials still not acted upon—including two actions that cover a great number of chemicals used in adhesives.
Special interest: foods, drugs.

90 **A robot redesigns Vicks**
Vicks demonstrates a quick, low-cost way to tally consumer opinions in the store. It is a shelf-mounted machine that tabulates in hours thousands of preferences for package design and other information, rather than consuming the weeks required for personal interviews.
Special interest: sales, advertising, designers.

92 **Carton that pours frozen foods**
Picking up a pour-and-store convenience idea that is a big success in film bags, Birds Eye overcomes technical problems to introduce loose-frozen peas in a single-wall locking carton. The conventional overwrap is replaced with a thin outer coating of polyethylene and an inner wax layer. A special double-flap construction permits easy carton opening and reclosing.
Special interest: frozen foods.

96 **One line for two problem bottles**
How to run two tricky and totally different containers on the same packaging line? Abbott Labs' engineers meet the challenge, posed by tapered bottles for Sucaryl, by arranging specially adapted equipment in an efficient "closed-circuit" plan. With minimum down time for change-over, speeds up to 150 per minute can be achieved. *By Herbert J. Oglesby.*
A production-methods article.

100 **Libby redesigns for trays**
This Chicago-based food packer has completed an extensive package-redesign program in which can-label and shipping-container graphics have been tailored to the requirements of tray stocking. The Libby name has been moved from the bottom to the top of labels, which offer equal display value from the front or back. Non-skid shippers carry the brand name on all tray facings.
Special interest: grocery products, supermarkets.

FRONT FEATURES

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Important new products from suppliers.

57 **Sounding Board**
We ask the readers: As a visitor, what method will you use to get the most out of the AMA Packaging Show next month?

71 **World Report**
What's news in foreign packaging magazines.

81 **Editorial Memo**
"What's the fuss?"

WE'RE MOVING

After March 17, the Executive and Editorial offices of MODERN PACKAGING will be located in a new office building at 770 Lexington Ave., New York 21, where Breskin Publications will occupy two floors. In the meantime, correspondence should be directed to the present address, 575 Madison Ave., New York 22. In the new location, telephone and teletype numbers will remain the same.

MODERN PACKAGING, Executive and Editorial Offices, 575 Madison Ave., New York 22, N.Y. Phone PLaza 9-2710

Please mail all correspondence, change of address notices, subscription orders, etc., to the above address. Teletype: TWX-NY 1-3063. Cable address: "Breskinpub." Quotations on bulk reprints of articles available on request.

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PACKAGING

THE COMPLETE AUTHORITY OF PACKAGING

102 **Spring Kist bagged frozen foods**
A *Success Story* (see cover). Two factors have carried Spring Kist to top rank among U.S. packagers of loose-frozen vegetables and fruits in economy-size pour-and-store polyethylene bags. The first: early alertness to the sales-making convenience of this specialty. The second: an ability to solve critical packaging problems—a talent that at one point turned potential disaster into a 600% sales increase.
General interest.

105 **Contoured pour pouch**
Packagers of specialized products that could use extra merchandising punch will be interested in a high-powered flexible unit pouch for Amchem powdered weed killer. Shaped like a watering can, to suggest its end use, the package is formed, filled and sealed on a special machine.
Special interest: moisture-sensitive products.

110 **High-speed stretch-film card packs**
The development of improved form-fill-seal machinery, permitting packaging speeds of up to 40 per minute, opens the way to volume use of the stretchable-film card pack—a simple skin package which is adaptable to an almost limitless variety of self-selection products.
A production-methods article.

113 **Solutions for the hobby market**
Setting out to solve a problem of pilferage, Revell learned a lesson in package merchandising that has paid off in new hobby-kit sales and lower over-all costs. Sealed boxes, the first solution, caused a sales drop by barring product visibility. The next step, polyethylene bags, set off a ruckus among consumers, who like the box-cover artwork. Now the bagged hobby kits come in unsealed boxes with de luxe cover art. Results: Appeal is up; pilferage is down.
General interest.

118 **Carton cleaner**
A low-cost industrial dust collector, adapted to Lactona's toothbrush-cartoning line, sweeps up paper chaff to give positive assurance of package cleanliness at the point of purchase.
A production-methods article.

TECHNICAL & ENGINEERING

123 **A new stress-flex tester**
Du Pont develops a mechanical-action device that simulates in the laboratory all the physical stresses which can cause failure in a flexible package. The new instrument permits prediction of the commercial durability of any flexible material, including films and foil.
By Herbert C. Horst and Robert E. Martin.

128 **Polymer-coated polyethylene**
A sparkling two-sided-coated film, produced by Olin researchers, is reported to offer high water-vapor protection and reduced gas transmission. Sealable and machinable, it is also resistant to grease, oil and odors. *By Orville J. Sweeting and Joseph J. Levitsky.*

132 **Nomograph for yield values**
It is often necessary for packagers to determine the yield or basis weight of a free film. Here is a simple graphic aid, with instructions, that enables film users to do the job merely by drawing a straight line between two known points. *By A. D. Galbraith.*

134 **Questions & Answers**
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MP

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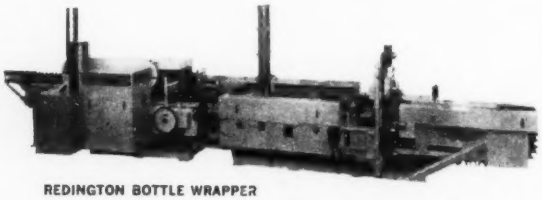
ABC ABP BPA

Famous package gets fast automatic handling on new Redington wrapper-packer installation

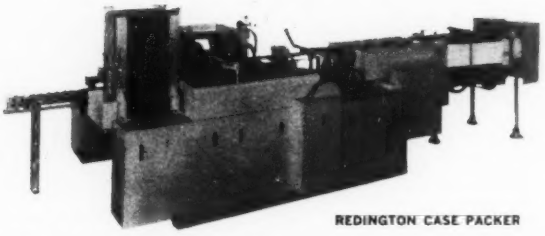
What happened when Lambert Hudnut Manufacturing Laboratories, Inc. called in Redington to design a complete line for wrapping and packing its Listerine bottle? Two new automatic machines were engineered and built to wrap the filled, capped and labeled bottles and case them for shipping . . . all at greatly increased speeds.



REDINGTON BOTTLE WRAPPER

In one continuous operation the Redington Wrapping Machine packages the bottles in corrugated liners, kraft paper wrappers, corrugated end protectors and end seals. The speed of 120 bottles per minute, compared to "about 50" for the older wrapping equipment, provides *the economy of a 140% increase!*

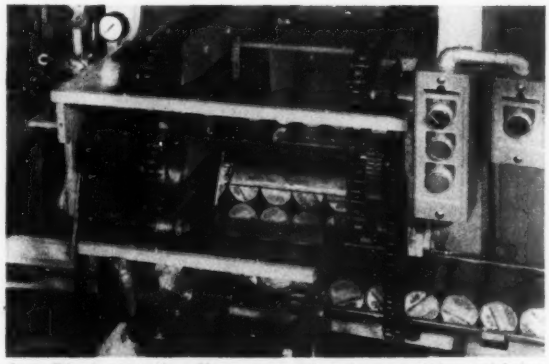
The wrapped Listerine bottles then go to the new Redington Case Packer. It operates as a dual unit: one for intake and accumulation; the other for case loading and handling. The cycle of each unit is independent of the other. The overall compactness of the equipment gives



REDINGTON CASE PACKER

added savings by releasing floor space for other productive uses.

This is another example of increased speed and economy resulting from the work of Crompton & Knowles Packaging Corporation. Its highly-specialized engineering organization will be glad to find the *efficient* answer to your need — whether for a simple wrapping machine or a completely integrated, multiple-operation packaging project — and for handling any type of product. For complete details, including leasing arrangements, write Crompton & Knowles Packaging Corporation, Holyoke, Mass., or Redington Division of Crompton & Knowles Packaging Corporation, 3000 St. Charles Road, Bellwood, Illinois.



Case filler in operation. Shows wrapped packages entering and being accumulated in the load forming section of the machine. From here they are automatically transferred into the preformed open case and it moves into the next section.

CROMPTON & KNOWLES C&K PACKAGING CORPORATION

since 1807

REDINGTON

AUTOMATIC MACHINES for CARTONING WRAPPING • SPECIAL PACKAGING

CROMPTON & KNOWLES PACKAGING CORPORATION

Holyoke, Mass. **Bellwood, Ill.**

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a specialized engineering organization offering a complete line of automatic packaging machines . . . and prompt, nation-wide service.

Dobeckmun helps solve a dual problem for Duncan Hines with twin packages:
(A) METALAM®
to give perishable egg whites the extra protection they need.
(B) Laminated, treated paper to keep the cake mix fresh.

packages for performance

DOBECKMUN

Solve problems and sell products with custom packages by Dobeckmun. Draw on the broadest range of materials and techniques, the biggest fund of experience, the boldest new concepts in flexible packaging. We take the trouble to pioneer because our experience proves it pays to be first. And you are first...first with product protection, consumer convenience and brilliant display that makes your name stand out. Unique, because your package is tailor-made. Put Dobeckmun packaging skills to work for you. Write or call THE DOBECKMUN COMPANY, a Division of The Dow Chemical Company, Cleveland 1, Ohio • Berkeley 10, California • Offices in most principal cities.

BOTTLES BY THATCHER

If you, too, are strong on service, you'll like the way we work with—and for—our customers.

GOOD CAPPING demands good caps—like Thatcher's dependable molded plastic tops. For special needs, call on our design department.

FOUND! A plastic tube that solves many packaging problems—Thatcher's *Vinyl* tube. Inert to most substances, and economical. For facts, call us.

THE BRAND'S ON THE BAND—that's how CELON seals put *sell* right on top of the bottle. Has a quality look. Protects your product, too.

Thatcher

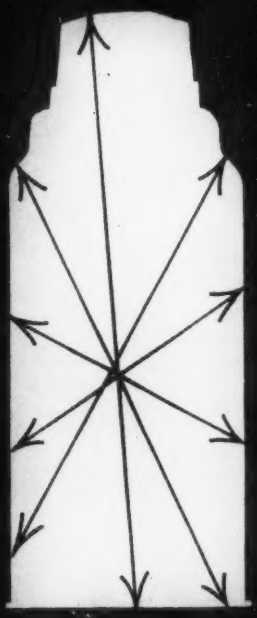
THATCHER GLASS MANUFACTURING CO., INC.
375 PARK AVENUE, NEW YORK 22, N.Y.

CELON DIVISION
Muscatine, Iowa

McKEE DIVISION
Jeannette, Pennsylvania

PLASTIC CONTAINER DIVISION
Nashua, New Hampshire

IS YOUR PRODUCT A "TIGER" UNDER PRESSURE?



SEAMLESS CROWN SPRA-TAINERS WILL HOLD IT!

Some high pressure products found in today's aerosols are as hard to handle as a tiger. Others, like delicate pharmaceuticals and fragrant cosmetics present different but equally difficult problems. For these hard-to-hold products the *seamless* Crown Spra-Tainer offers a safe and practical solution. As originators of the disposable aerosol can, Crown offers a full line of both seamless and fabricated aerosol cans in a wide range of sizes, for every type of product . . . plus more experience in this field than anyone else can provide. For your packaging problems call on the leader . . . call on Crown!

Your Packaging Deserves Crown Quality

CROWN *cans • crowns • closures • machinery*

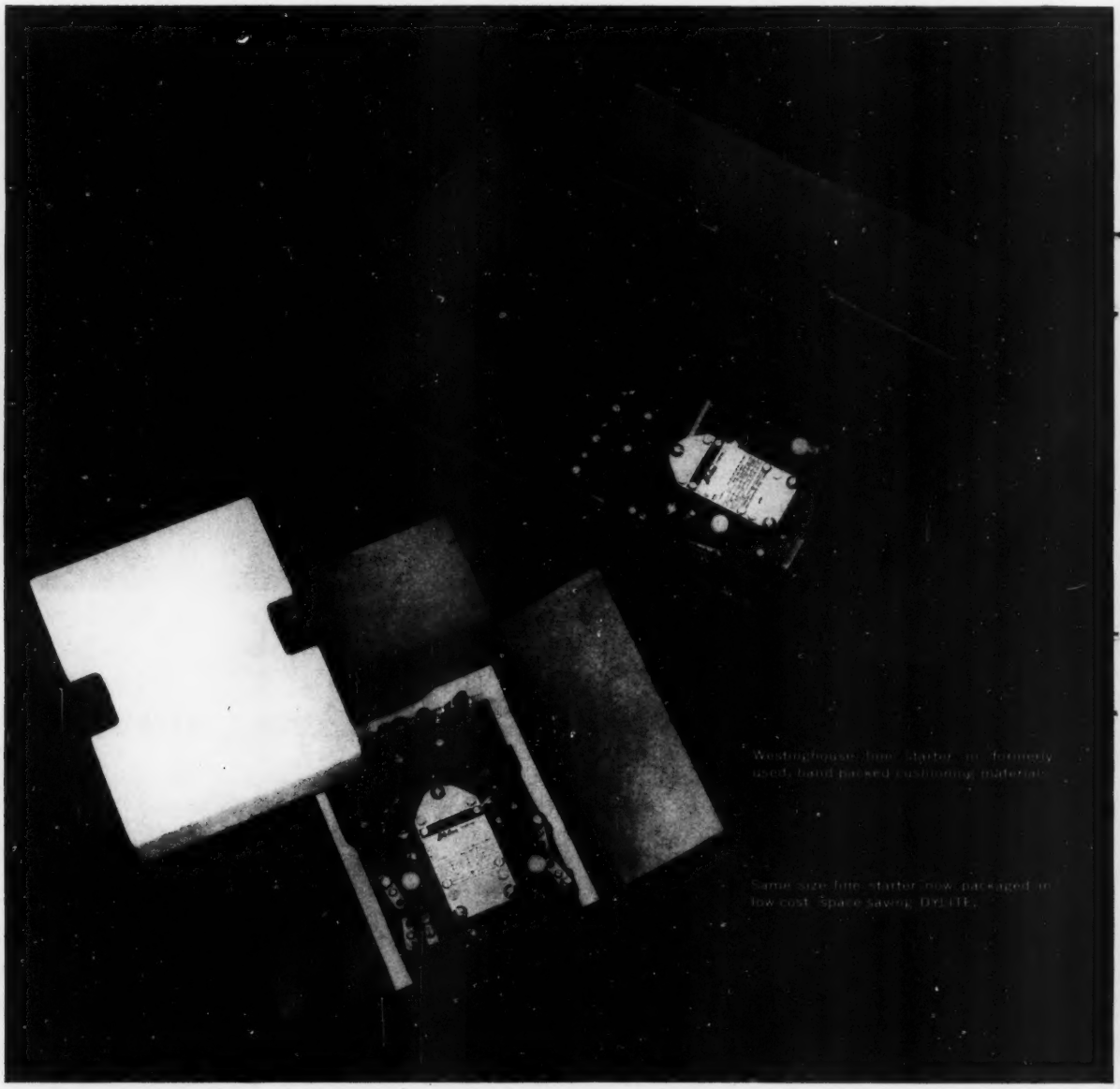
CROWN CORK & SEAL CO., INC., 9300 Ashton Rd., Phila. 36, Pa.

KOPPERS PLASTIC PACKAGING IDEAS THAT MAY GIVE YOU AN IDEA

Westinghouse cuts package size in half

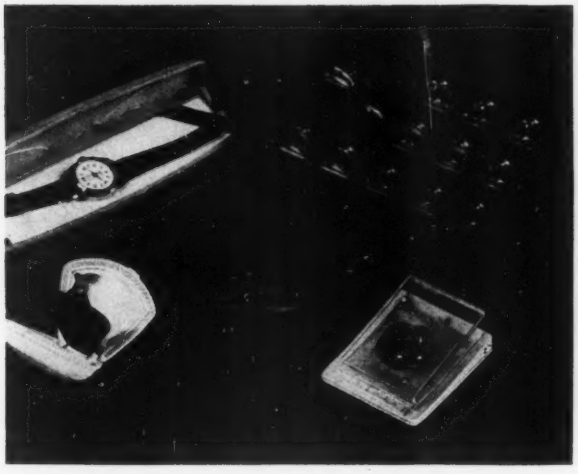
This Westinghouse motor starter is cushioned in pads of DYLITE® expandable polystyrene. DYLITE pockets this delicate instrument better than previously used molded pulp and corrugated boxboard materials. It enables Westinghouse to cut their package size 50% . . . and reduce material, labor and shipping costs.

A DYLITE package is extremely lightweight . . . it's easy to pack and load. This amazing plastic is waterproof, non-dusting and it's an excellent thermal insulator. DYLITE can be molded easily to almost any size or shape. It can be colored and decorated, too. Use it as a cushioning material in *all* types of shipping containers. *DYLITE parts molded by Expandable Plastics Corporation, Akron, Ohio*



Westinghouse line starter in formerly used, hand packed cushioning material.

Same size line starter now packaged in low cost, space saving DYLITE.

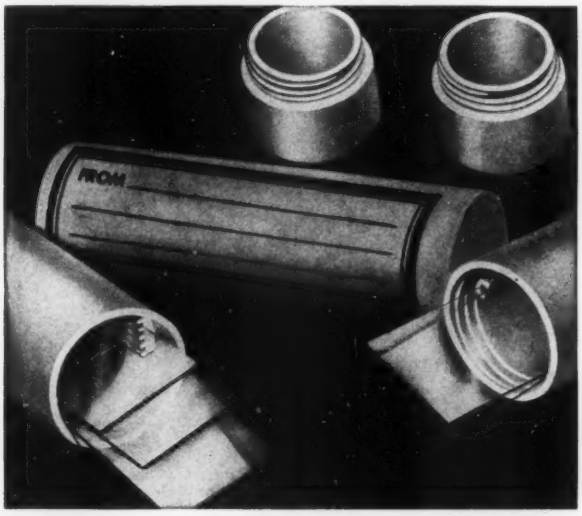


Jewelry cases with display appeal

Quality products deserve an individually tailored display case to compliment their beauty and value. These attractive Rocket jewelry cases provide such sales appeal.

The cases are molded from DYLENE® polystyrene, a Koppers plastic that is ideal for packages demanding dimensional stability, protection and precision engineering. DYLENE has inherent strength and impact resistance. It permits a variety of surface textures, colors, shapes and molds easily for unlimited packaging applications.

DYLENE cases manufactured by Rocket Jewelry Box Co., New York 51, N. Y.



Container keeps glass slides safe

You can drop this SUPER DYLAN® container on a concrete floor and the glass micro slides inside won't break. Precision-molded grooves hold the slides firmly in place; the heavily-threaded cap screws tight preventing the slides from moving up and down. The container is lightweight, attractive and rugged. It won't chip or dent.

This SUPER DYLAN high-density polyethylene container needs no interior cushioning materials. It's convenient to store, easy to ship; it cuts mailing costs. And because this plastic is heat resistant, the container can be sterilized and reused. *SUPER DYLAN containers molded by Monrovia Plastics, Monrovia, Calif.*

New cap has a "snip-off" tip

With this new DYLAN® polyethylene cap, housewives just cut off the tip and get a measured flow of Liquid Lux with every squeeze of the bottle. It eliminates bothersome measuring by capsful. The new "snip-off" cap tightly grips a threaded neck on the plastic bottle... no drips, no leaks.

DYLAN polyethylene has a smooth, glossy finish. It won't chip or dent. DYLAN is durable, lightweight, rust-proof, and has good chemical resistance. It molds easily to any size, shape or color closure. This versatile plastic adds consumer appeal to the top of *any* detergent, cosmetic, food, chemical or pharmaceutical package. *DYLAN caps molded by Augusta Plastics, Inc., Bronx, New York • Formold Plastics, Blue Island, Ill. • Gibson Associates, Inc. Cranford, N. J.*

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Find out how Koppers family of plastics can help improve your package. For complete information, send the coupon below.

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Plastics Division
Dept. 111, Koppers Bldg.
Pittsburgh 19, Pennsylvania

Send me information on the following Koppers plastics:

- ☐ DYLITE® expandable polystyrene
- ☐ DYLAN® polyethylene
- ☐ SUPER DYLAN® high-density polyethylene
- ☐ DYLENE® polystyrene

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Company _____

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DAVIS ACETATE makes color more colorful!

The brilliance and crystal clear sparkle of Davis Acetate was selected to point up the important color element of NO-ODOR MARKER, manufactured by Speedry Chemical Products, Inc.

The vacuum-formed bubble conforms faithfully to the shape and design of the container, protecting its colorful design and imprint against fading, dust, and shopwear. The bubble package was manufactured by KC Plastics Company, Brooklyn, New York.

Davis extruded acetate sheets, rolls and film come in all gauges—transparent, translucent, or opaque—and are ideal for vacuum forming.

We have been advising industry on plastic packaging for over 40 years, and we would welcome the opportunity to help you.

Let us send you a brochure on our facilities and the wide range of plastics we produce, together with their properties and applications.

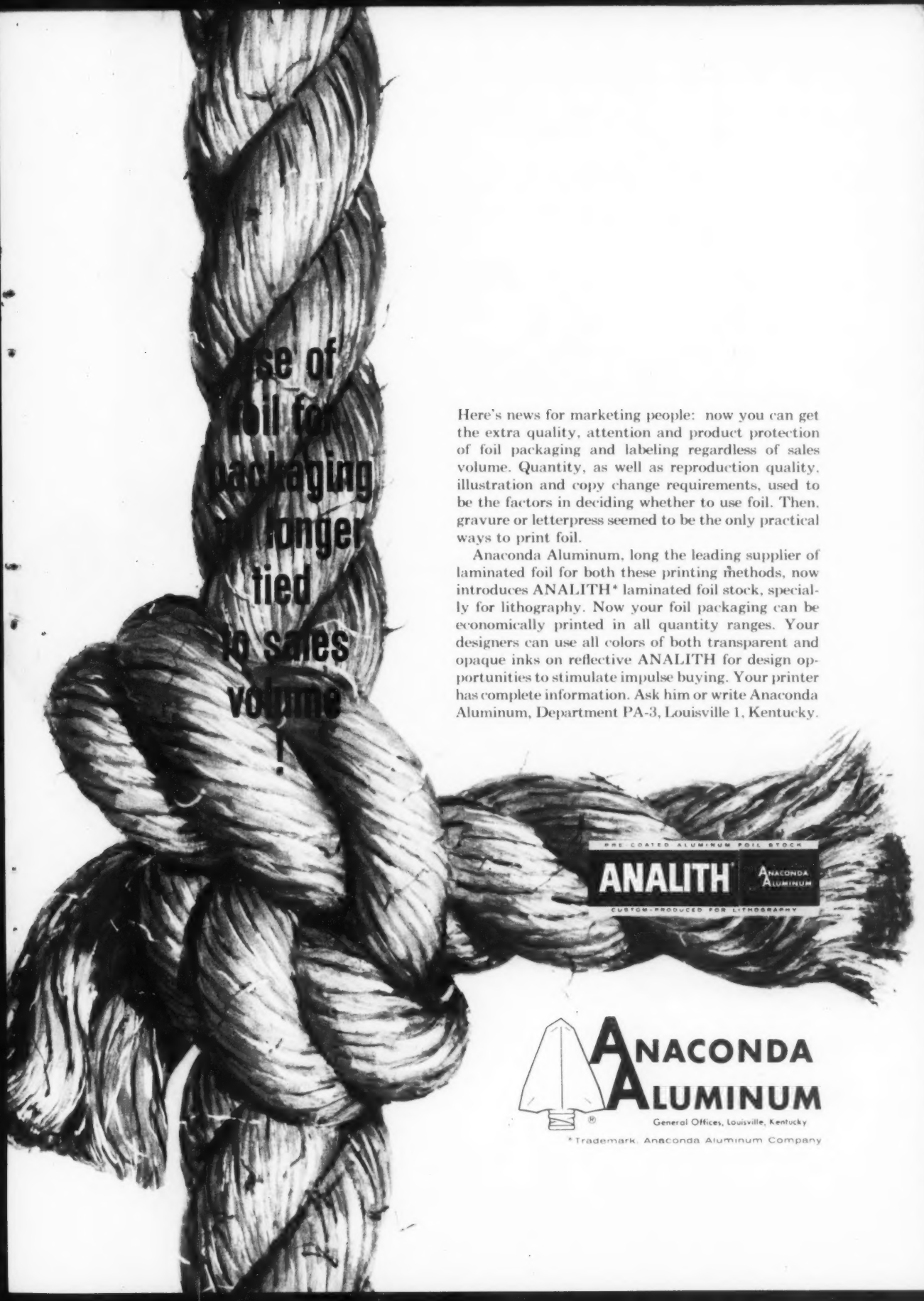
JODA

Joseph Davis

PLASTICS COMPANY

430 Schuyler Avenue, Kearny, N. J.

Phone: WYman 1-0980 New York: BArclay 7-6421



Here's news for marketing people: now you can get the extra quality, attention and product protection of foil packaging and labeling regardless of sales volume. Quantity, as well as reproduction quality, illustration and copy change requirements, used to be the factors in deciding whether to use foil. Then, gravure or letterpress seemed to be the only practical ways to print foil.

Anaconda Aluminum, long the leading supplier of laminated foil for both these printing methods, now introduces ANALITH* laminated foil stock, specially for lithography. Now your foil packaging can be economically printed in all quantity ranges. Your designers can use all colors of both transparent and opaque inks on reflective ANALITH for design opportunities to stimulate impulse buying. Your printer has complete information. Ask him or write Anaconda Aluminum, Department PA-3, Louisville 1, Kentucky.

PRE COATED ALUMINUM FOIL STOCK

ANALITH

ANACONDA ALUMINUM

CUSTOM-PRODUCED FOR LITHOGRAPHY

ANACONDA ALUMINUM

General Offices, Louisville, Kentucky

*Trademark, Anaconda Aluminum Company

Here's 0.1° Sensitivity at a Competitive Price!

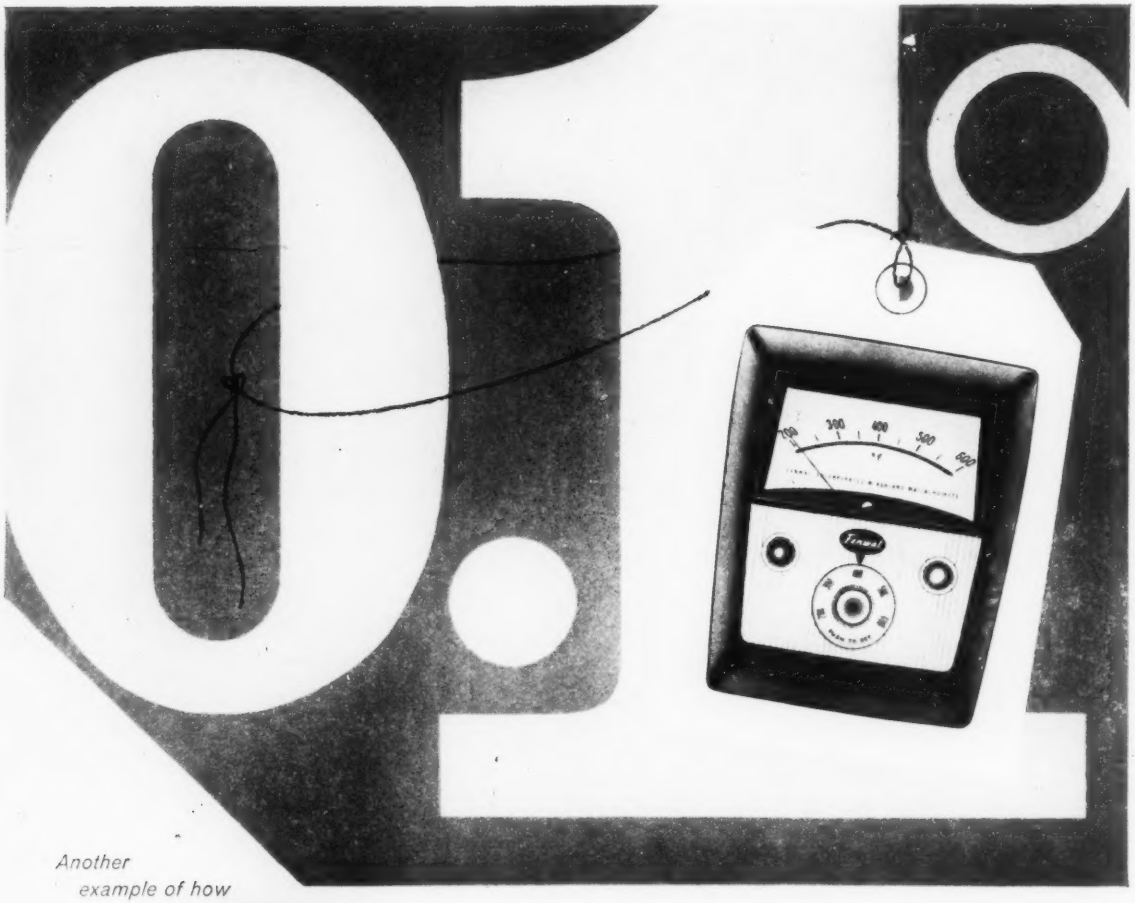
... Fenwal's New "561" Temperature Controller

The new "561" indicating controller responds to temperature changes of 0.1° or less! And is yours at a competitive price! These two features alone make it an instrument you should investigate... but there's more!

You can choose from five standard temperature ranges . . . within the span of −50 to 600°F. Furthermore, scales start and end within *your* ranges, permitting larger graduations, better legibility, easier readout. And control and indication are separate but simultaneous. *Should your indication fail the "561" will continue to control with complete accuracy.*

The Fenwal "561" indicating controller insures 100% reliable temperature control under the high speed, high heat conditions which govern many sealing operations. Its indication and control will not vary with fluctuations of input voltage nor changes in ambient temperature. It offers the option of either ON-OFF or proportioning control . . . has 10 AMP/120 VAC relay capacity. Smartly styled to complement modern industrial machines and interiors, *the "561" offers you all these extras at a competitive price.*

A Fenwal engineer will be glad to supply information on the "561", or any other temperature control in Fenwal's broad line. Write Fenwal Incorporated, 63 Pleasant Street, Ashland, Massachusetts.



Another example of how

Fenwal CONTROLS TEMPERATURE . . . PRECISELY

reynolon®

shrinkable, oriented PVC FILM protects produce profits

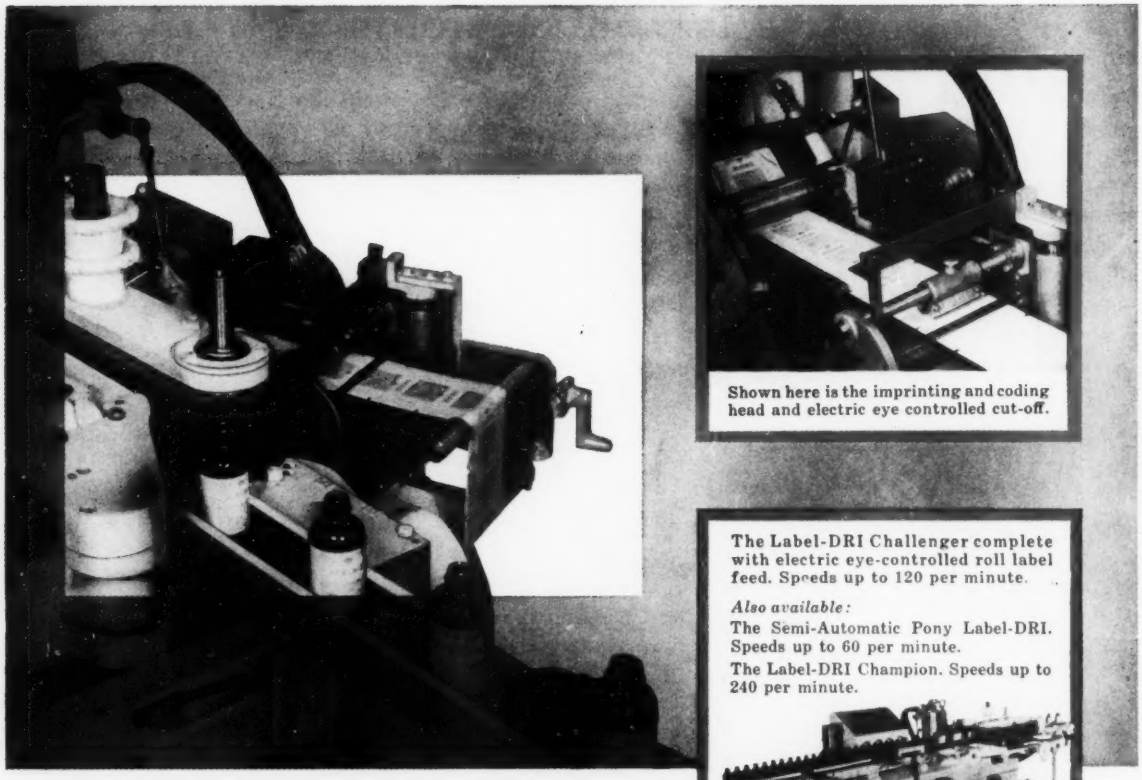
Fruit and vegetables stay fresher, look better in new oriented Reynolon PVC—the ideal, low cost material for packaging at shipping point, distribution point or in-store. The unretouched photo shows supermarket apples packaged in this material.

Reynolon oriented PVC is crystal clear. It is shrinkable—provides a skin-tight package. It has high tensile strength, offers low temperature flexibility, has excellent shelf life. It is printable and sealable by heat or by adhesives. It is easily laminated to aluminum foil, paper, chipboard and other materials.

For details and technical assistance on Reynolon films, contact your nearest Reynolds office. Or write Reynolon, *Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Virginia.*

New roll feed "no glue" labeling

Automatic verification, coding, protection and control



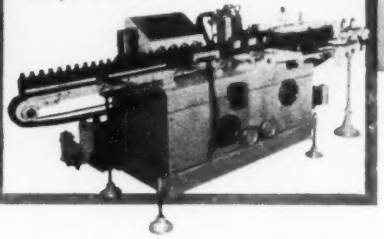
Shown here is the imprinting and coding head and electric eye controlled cut-off.

The Label-DRI Challenger complete with electric eye-controlled roll label feed. Speeds up to 120 per minute.

Also available:

The Semi-Automatic Pony Label-DRI. Speeds up to 60 per minute.

The Label-DRI Champion. Speeds up to 240 per minute.



Three New Jersey Label-DRI models now available

You get fast, fool-proof "no glue" labeling with these new roll feed Jersey labelers.

1 **Automatic label verification**—Once the first label has been checked, you know all other labels in the same continuous web must be the same.

2 **Automatic label coding** – Each label gets a clear imprint just before being applied to the container.

3 **"No-glue" labeling** – Labels in roll form are printed on thermoplastic label stock. You eliminate adhesive coating and are sure of more attractive label application.

4 **"Greater labeling efficiency"** – Eliminates mechanical separation of labels. No hopper to be set or reset to take care of label-cutting variations. No "doubling" due to "cling" caused by static electricity – ink offset – or dull cutting.

Check the Jersey Label-DRI that's best for you. Ask for details and a demonstration.

MAKERS OF THE PONY LABELRITE
NJM
NEW JERSEY MACHINE CORP

NEW JERSEY MACHINE CORPORATION

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Your Next Package Can Benefit From Polyethylene's Dramatic Sales Power!

The point of sale becomes your product's strongest sales tool when you package in an IMCO polyethylene container. Polyethylene allows almost endless variations in form and color and gives package designers a freedom they aren't allowed with conventional materials.

IMCO's experienced engineers can produce almost anything your designers can conceive. Mennen's new "Brake" package is a spectacular example. Presented a creative design, IMCO supplied the engineering to develop the vision into a reality. IMCO production facilities mold and decorate all elements of this unusual five-part package except the applicator and an interior rubber grommet.

It's high time you discover what IMCO polyethylene containers can do for your product. Prices are now directly competitive with glass and tin. Chemical improvements have made polyethylene impermeable to most things, even perfumed cosmetics, creams and household products. Our technical staff can assist you with tests, and quote prices on stock or custom-made bottles and jars. For immediate action, contact the Sales office nearest you.

IMCO

CONTAINER COMPANY

75th and Cleveland
Kansas City, Missouri

A Division of Rexall Drug and Chemical Company

Sales Offices
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Kansas City, Mo.
Chicago, Ill.
Los Angeles, Calif.
Cooksville, Ont., Can.

Mfg. Plants
Belvidere, N. J.
Cooksville, Ont., Can.
Kansas City, Mo.
Excelsior Springs, Mo.
Harrisonburg, Va.
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IMCO **SELLS** THE BEST

...from a network of varnish producing facilities

S&V OVERPRINT VARNISHES

for every printing requirement...

Economy and service are the only equals to the superior printability you get with every S&V Overprint Varnish. And, you can be sure...S&V has an outstanding varnish to meet your specifications every time...everywhere. On your next run, have an S&V Varnish Center provide an overprint varnish for maximum color retention... excellent trapping, wet or dry...minimum color... outstanding gloss...scuff and rub resistance and excellent slip quality. You'll never be more satisfied.

SINCLAIR and VALENTINE Co.
PRINTING INK DIVISION OF AMERICAN-MARIETTA COMPANY
611 WEST 129TH STREET, NEW YORK 27, NEW YORK

CELLU-CRAFTSMANSHIP MAKES THE DIFFERENCE

1/10th OF A SECOND IS ALL THE TIME SHE'LL GIVE YOU! Your product succeeds or fails in the fraction of a second a shopper takes to make up her mind. *Cellu-Craftsmanship* brings your package instantly into focus . . . makes the difference between the "go-by" or the "go-buy." Cellu-Craft's completely integrated service . . . from Art through Laminating, Printing, and Converting . . . assures you of the crisp, brilliant packaging that flags her attention instantly . . . impels the shopper to buy *your* product. Find out today why the big difference in packaging and sales is *Cellu-Craftsmanship.*

CELLU-CRAFT
PRODUCTS CORPORATION

General Offices & Plant: 1401 4th Ave., New Hyde Park, New York, PRimrose 5-8000. *Sales Offices in principal cities.*
DESIGNING of flexible packages. PRINTING: Glolux® Gravure, Process, Line & Tone Flexography on Cellophane, Polyethylene, Glassine, Extrusion Coatings, Laminations, Foil, Acetate, Pliofilm. CONVERTING: Rolls, Sheets, Bags, Pouches, Envelopes

Royal Buffet
sliced BACON
Dorann
Instant
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New!
20 SERVINGS
VANILLA
ROYAL
DANISH
Wagtail

"stores for more"

marathon

Today's "silent salesmen" do double-duty; they sell from store shelves . . . *keep* selling in countless kitchens.

See how easily she opens, serves, recloses and stores these packaged foods. At Marathon this convenience is as much a part of the package as the paper, paperboard, film and foil we print on—helps explain why Marathon is a leading supplier of food packaging.

Store *this* fact for future use. If you have a packaging problem, chances are *Marathon has the answer.*

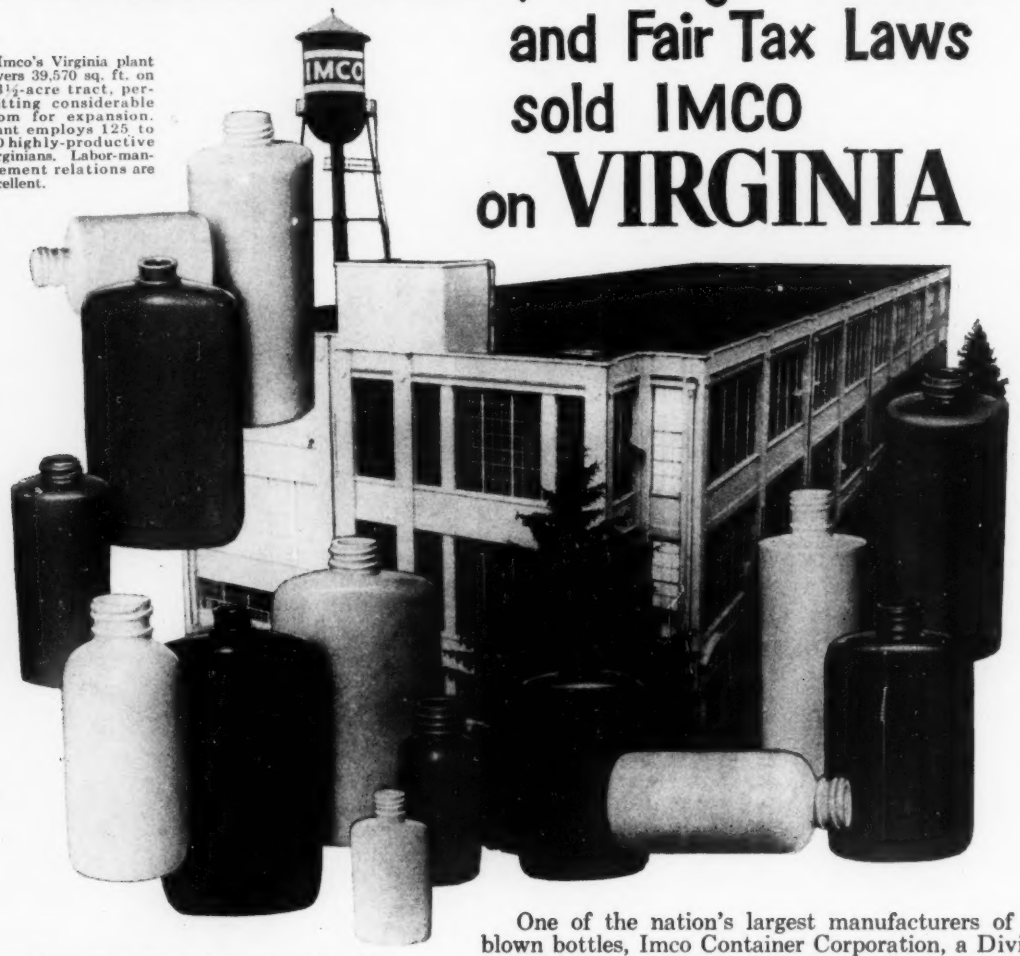
Marathon, A Division of American Can Company, Menasha, Wisconsin. In Canada: Marathon Packages Limited, 100 Sterling Road, Toronto 3.

For packaging . . . and ideas . . .

you can't beat marathon

Productive Workers, Strategic Location and Fair Tax Laws sold IMCO on VIRGINIA

Imco's Virginia plant covers 39,570 sq. ft. on a 3½-acre tract, permitting considerable room for expansion. Plant employs 125 to 130 highly-productive Virginians. Labor-management relations are excellent.



Many millions of Imco plastic bottles and containers are used each year by the cosmetic, pharmaceutical, household, chemical and other industries. Transportation facilities at Harrisonburg are excellent.

Imco's Virginia plant is located in beautiful Shenandoah Valley . . . surrounded by superb mountain scenery, historic shrines, natural wonders, fine schools and colleges. Outdoor living may be enjoyed all year 'round.

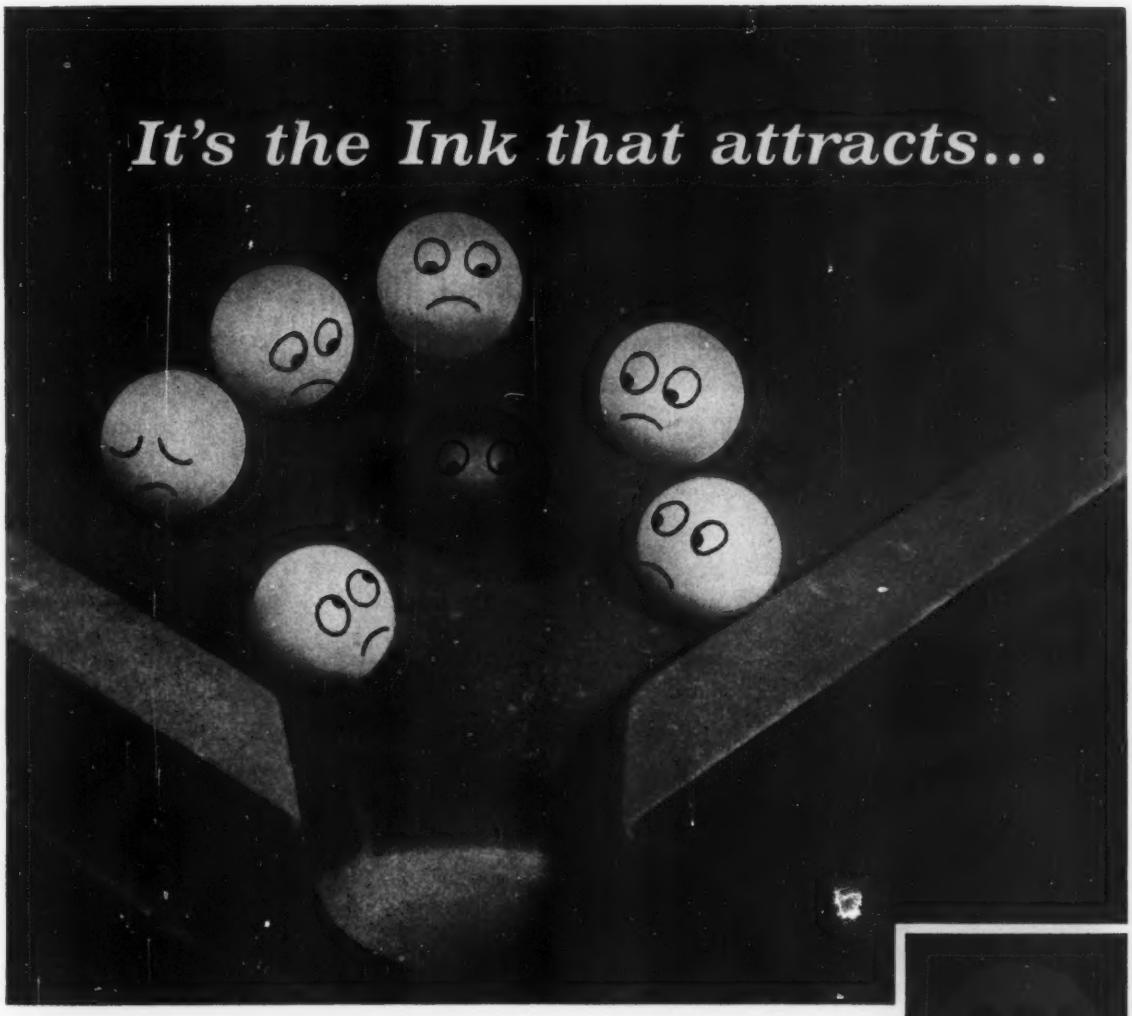
One of the nation's largest manufacturers of plastic blown bottles, Imco Container Corporation, a Division of Rexall Drug and Chemical Company, began operations at Harrisonburg, Virginia, in January, 1959. The plant is now working 3 shifts around the clock . . . a typical example of how companies flourish in Virginia's "growth climate."

Virginia was chosen for the Imco plant because of freight savings in serving East Coast customers . . . availability of hard-working, conscientious labor . . . and the advantages of Virginia state tax laws. Company officials also praise the all-out cooperation of the local industrial development corporation. Imco has its own employee training program and is proud of both quantity and quality of production. Management sums up its Virginia operations as "highly successful."

Find out more about the profit advantages of Virginia. Phone, wire, write or visit in complete confidence:

C. M. NICHOLSON, Jr., Commissioner
Division of Industrial Development and Planning
Virginia Dept. of Conservation and Economic Development
Room 810-MP State Office Bldg., Richmond 19, Va.
Phone: MIlton 4-4111, Ext. 2255

You, too, can find these... and many other great competitive advantages in **VIRGINIA**
. . . a wonderful place to play or work



IDENTIFY and BEAUTIFY with...

PRINTING INKS can help your product, package or promotion rack up better results with *on the ball* action. They'll cue you up to higher sales while lack-lustre competition lies behind the eight ball.

That's why it's so important to use the right printing inks—right in color, right in quality, right in cost, and right in performance. Inks that will do a good job both on the press and on the end product.

Let GPI help you attract and hold more customers with a complete line of inks for letterpress, lithographic, gravure or flexographic printing.

And, if it's *reds* you are particularly interested in we have them all from *Apple* to *Wine*. We'd be glad to make one especially for you. Why not give us a try—simply call or write:

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Branches in all principal cities

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DIVISION

Sun Chemical Corporation

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Give You 2-WAY SAVINGS!

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Ideal for Paper • Cellophane
Plastics • Rubber • Mylar
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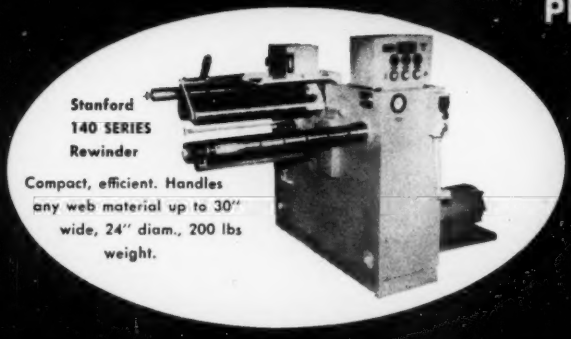
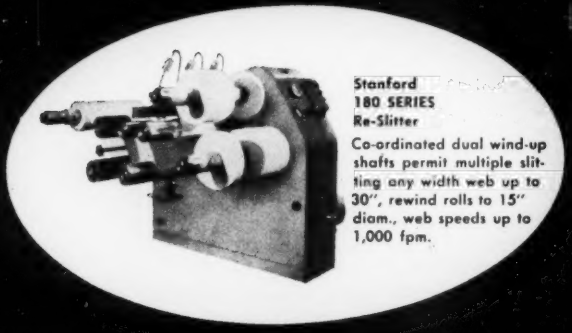


Stanford 140 SERIES Rewinder

Compact, efficient. Handles any web material up to 30" wide, 24" diam., 200 lbs weight.

FEATURING EXCLUSIVE "CANTILEVER" CONSTRUCTION

Open-end shafts permit faster loading, threading and unloading without hoists . . . save ½ to ⅔ set-up time through simple, one-man operation!



Stanford 180 SERIES Re-Slitter

Co-ordinated dual wind-up shafts permit multiple slitting any width web up to 30", rewind rolls to 15" diam., web speeds up to 1,000 fpm.

Here is a "must" for every web-fed printing, packaging, and converting plant! Stanford "Doctor" Machines are a compact combination of Automatic Web Guiding, Slitting, and Rewind components. They quickly and easily salvage rolls rejected for telescoping, off-register, and other causes . . . also perform as economical, efficient production slitters on many short-run and narrow-width slitting and rewinding jobs.

Write, wire, or phone today for complete technical data. List of users on request.

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Save down-time . . .
Speed production
with Stanford

Stanford ENGINEERING COMPANY

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BARTELT

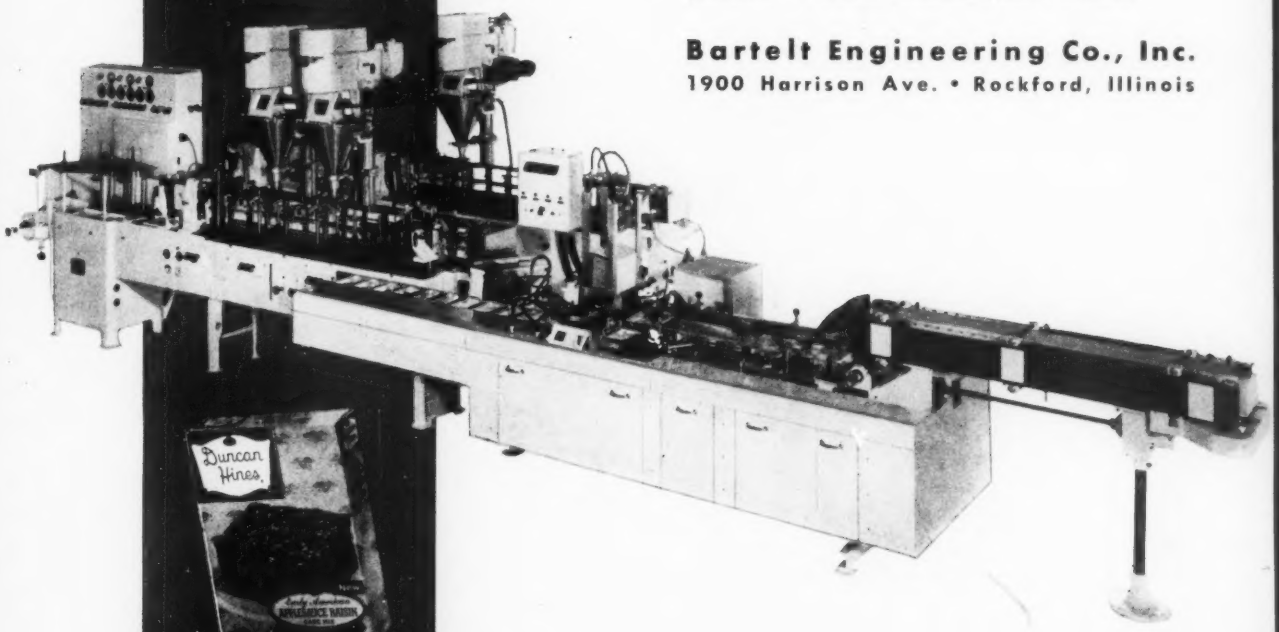
packaging machinery is on the job for...

Duncan Hines®

For the packaging of their Duncan Hines line of prepared mix products . . . Procter & Gamble uses Bartelt Automatic Packaging Machinery.

Where package production must yield consistent quality . . . where package standards must build solid consumer acceptance . . . where specialized needs demand creative engineering, Bartelt know-how is at work. Bartelt machinery is providing distinctly superior packaging for the finest of products . . . where unfailing quality counts.

Bartelt Engineering Co., Inc.
1900 Harrison Ave. • Rockford, Illinois



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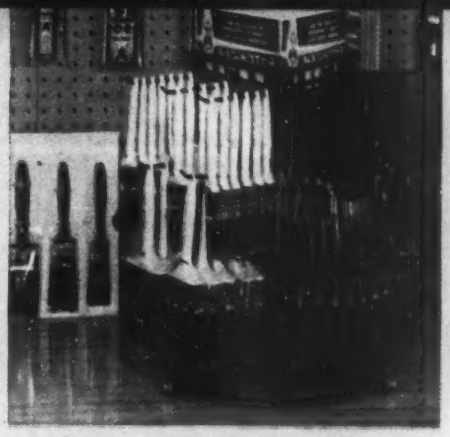
MANUFACTURING COMPANY

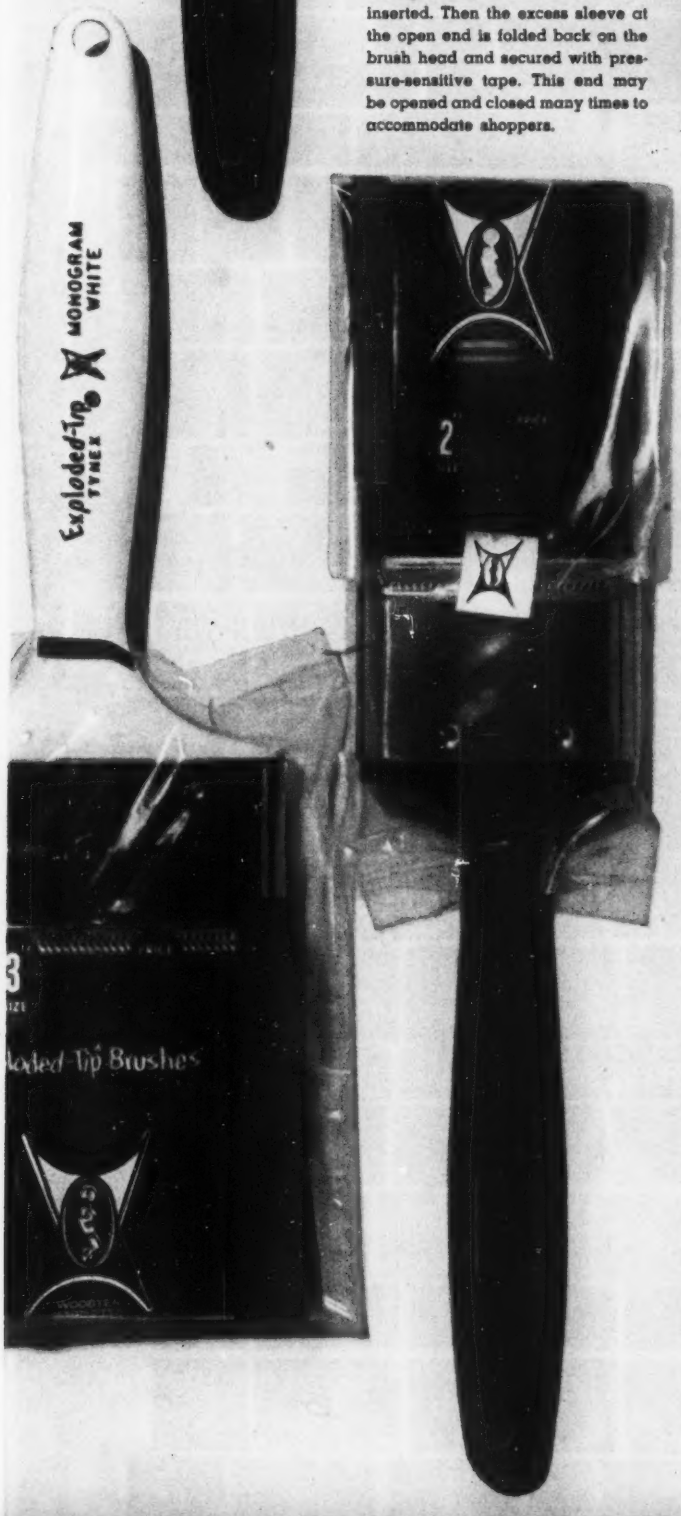
A New Era Letterpress Lets You

COMBINE SEVEN OPERATIONS IN ONE PASS

Printing is just *one* of many separated steps in label production. But not on a New Era Press! In a *single pass*, it prints in any number of colors; die cuts; slits; punches; perforates; numbers; cuts off, rewinds or folds. What's more, a New Era Press *handles any type of label stock* including heat-seal or pressure-sensitive. Delivers up to *7,500 impressions* an hour! Learn more about the remarkable New Era Press! Write today on your letterhead for free Bulletin #211. New Era Mfg. Co., Box #400, Dept. MP-1, Hawthorne, N. J.



Here's how the wrapper works. The package consists of a sleeve twice the length of the brush head. One end is open; the other is partially heat-sealed, leaving an opening through which the brush handle is inserted. Then the excess sleeve at the open end is folded back on the brush head and secured with pressure-sensitive tape. This end may be opened and closed many times to accommodate shoppers.



To paint a brighter sales picture, package in film of TENITE®

POLYETHYLENE

an Eastman plastic

What's the best way to package a paintbrush? The Wooster Brush Company, Wooster, Ohio, has the answer: sleeves made from extruded film of Tenite Polyethylene.

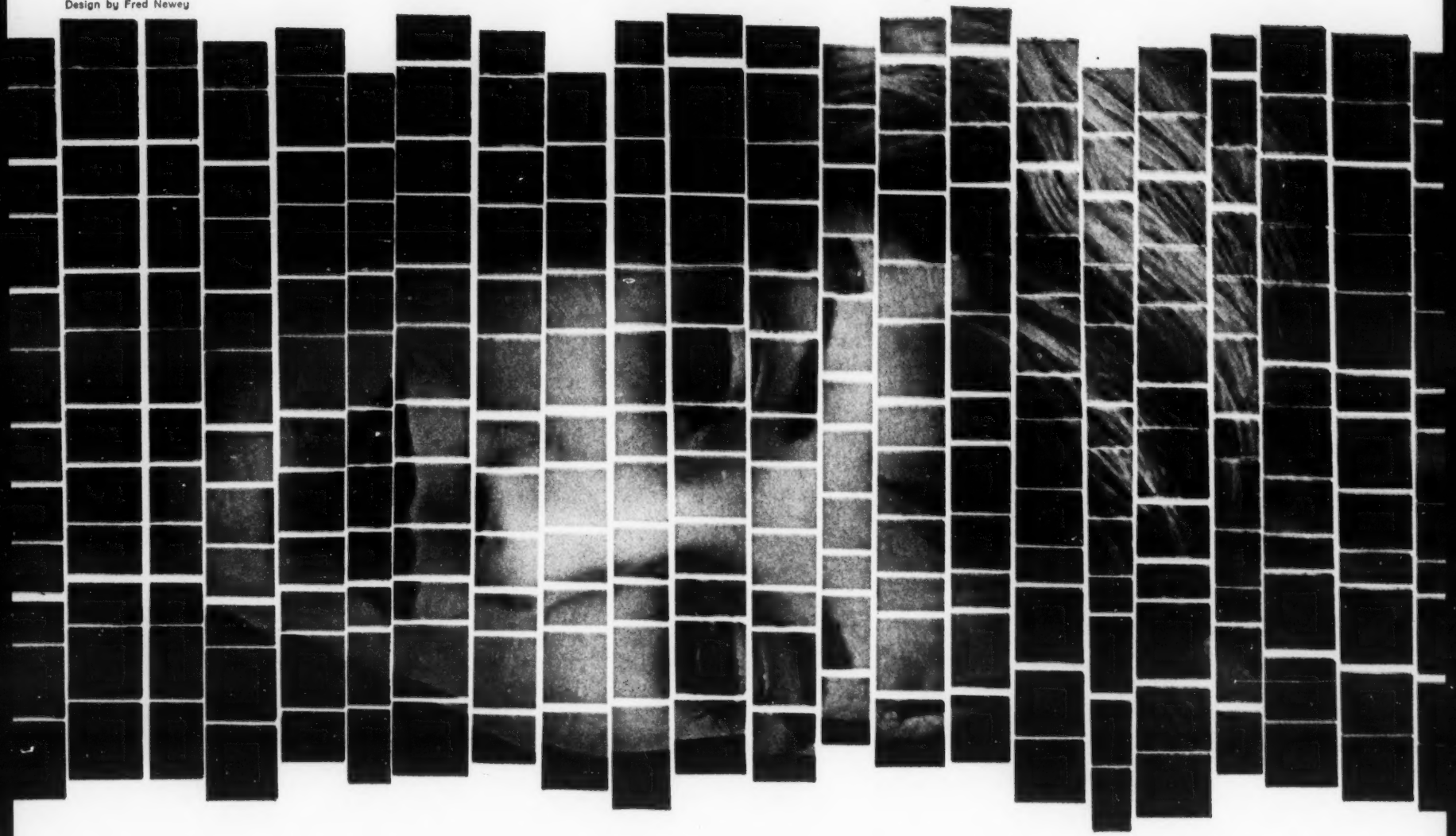
These transparent sleeves reveal the texture of the brushes without exposing them to dust and handling. And the unique design made possible with the versatile film permits easy access for close examination of the bristles.

Shoppers appreciate this modern packaging material. It makes a choice so much easier. But manufacturers, too, find many advantages to packaging in film of Tenite Polyethylene. It performs efficiently on high-speed packaging machines. Its outstanding toughness makes for safe handling, shipping and storing. Its light weight cuts shipping expenses. Its strong heat-seals, obtained at low sealing temperatures, increase package durability. Its resistance to moisture transmission prolongs freshness of packaged products.

Film of Tenite Polyethylene has proved itself in many packaging applications...dry groceries, rack and counter merchandise, and perishable foodstuffs. If your sales picture could be a bit brighter, consider packaging your product in sparkling clear film of Tenite Polyethylene. For more information write EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

Packaging sleeves for The Wooster Brush Company's paintbrushes and rollers are designed, printed and manufactured by Canton Containers, Inc., Canton 7, Ohio.

Design by Fred Newey



Patterns in Packaging / There is something different about packaging by Bradley-Sun . . . something which prompts a discriminating firm to select *several* refreshing tubes from our varied selection.

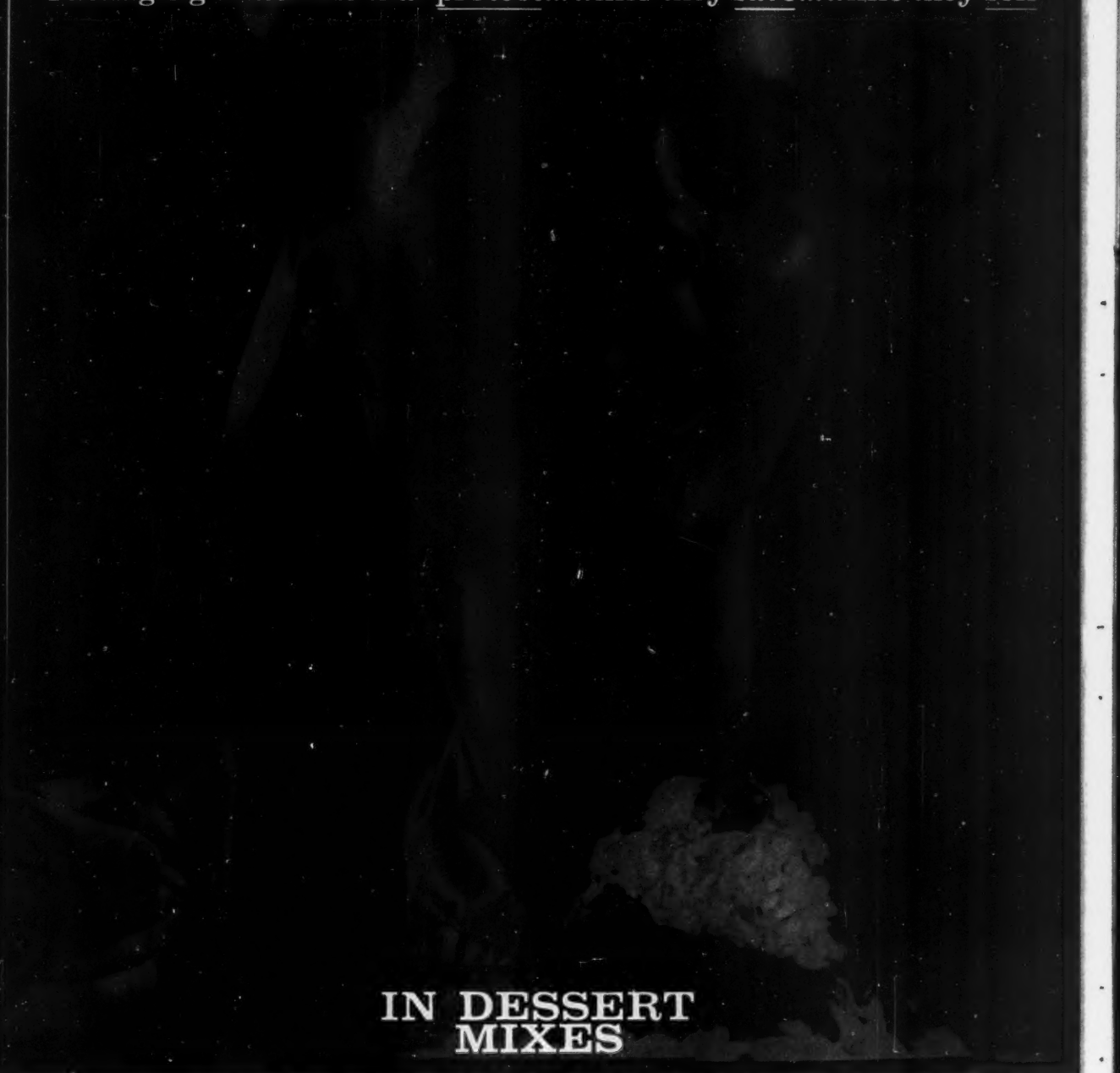
The soft allure of polyethylene enhances the sale . . . endears the product through the entire period of use. When your product is packaged by Bradley-Sun, charm *and* convenience go hand in hand. Let us tell you more about these merchandising advantages.

The package is your product at the point-of-sale!

BRADLEY Sun

Division of **American Can Company,** *Hillside, New Jersey* / *Sun Tube of Canada, Ltd. Ottawa, Ontario*

Packaging materials that protect... while they save... while they sell



IN DESSERT MIXES

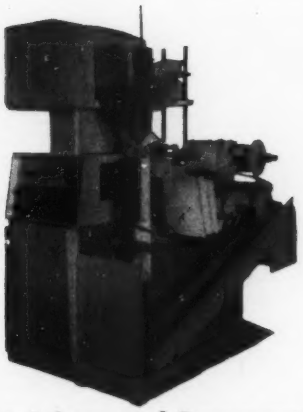
Four out of five of the largest dessert mix manufacturers *regularly* use Riegel protective packaging materials. Personal experience has given them faith in Riegel's technical leadership . . . reliance on Riegel for just the right packaging for their products. Confidence like this can be found among sales leaders in many fields. Why not talk to Riegel *now*.

4 OUT OF 5 BUY

Riegel

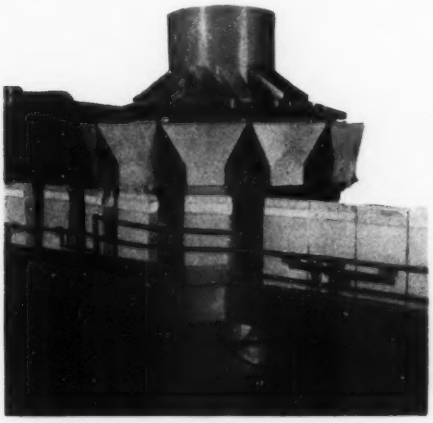
Over 600 different materials . . . standard or tailor-made . . . pouch papers, paperboards, glassines, foils, films . . . laminated in various combinations . . . plastic-coated or waxed . . . printed or plain . . . are made available by Riegel to assure you a tailor-made blending of product protection, machine efficiency, and low cost. Write Riegel Paper Corporation, 260 Madison Ave., New York 16.

Do You Have Packaging Problems?



Wright Advanced Bagmaster

Completely automatic system to make the bag, electronically weigh and fill the product, and seal the bag. Advance features permit the precision packaging of multi-dimensional products.

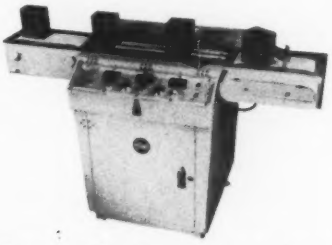


Wright NT Weigher

A completely automatic rotary net weigher for high speed packaging in containers the total output of a continuous process.

M-2 Hy-Tra-Lec® Weigher *with New Speed Fill Turret*

A Semi-Automatic System to precision weigh a wide variety of products into bags, boxes, jars, or cans. The new Speed Fill Turret allows greater ease and speed for attendant.



Wrightronic® Checkweigher

100% checkweighs articles in motion at high speeds with extreme accuracy. The unit can be used to reject packages over and under acceptable weights. Counters provide total production tally of over, under, and correct weights.

Wright Machinery Company has a complete line of weighing and filling equipment for free-flowing, hard to handle products for manufacturers packaging ½ ounce to 16 ounces. Wright engineers will adapt the recommended machine or system to suit your requirements. Speed, accuracy, and gentle product handling are features included in all equipment. For information on how Wright can solve your packaging problems, write us on your letterhead; for detailed information on above machines, just fill out the attached coupon.

Packaging Machinery Since 1893

WRIGHT MACHINERY COMPANY / *DIVISION OF SPERRY RAND CORP. DURHAM, NORTH CAROLINA*

NAME.....

COMPANY.....

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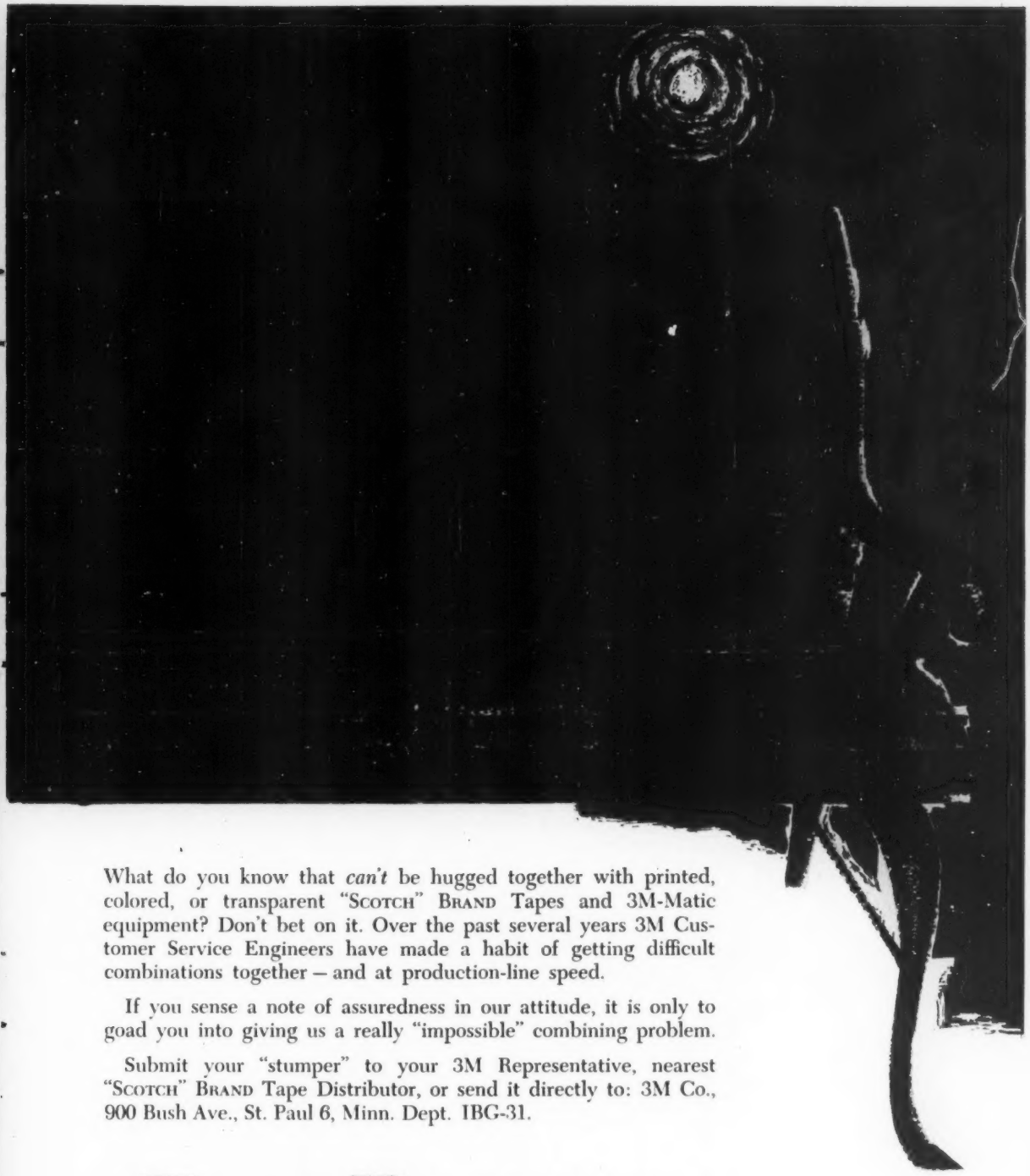
For togetherness in packaging...

the "matchmaker" is a SCOTCH BRAND applicator

REG. U.S. PAT. OFF.

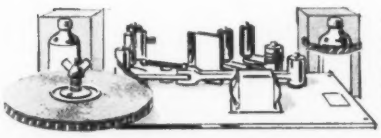
© 1961, 3M CO.; "SCOTCH" IS A REGISTERED TRADEMARK OF 3M CO., ST. PAUL 6, MINN.



What do you know that *can't* be hugged together with printed, colored, or transparent "SCOTCH" BRAND Tapes and 3M-Matic equipment? Don't bet on it. Over the past several years 3M Customer Service Engineers have made a habit of getting difficult combinations together – and at production-line speed.

If you sense a note of assuredness in our attitude, it is only to goad you into giving us a really "impossible" combining problem.

Submit your "stumper" to your 3M Representative, nearest "SCOTCH" BRAND Tape Distributor, or send it directly to: 3M Co., 900 Bush Ave., St. Paul 6, Minn. Dept. IBG-31.



"SCOTCH" BRAND Combination Bundler Heads can be mounted singly or in pairs for all types of *togetherness* packaging at speeds up to 75 units per minute.

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WRAPPING EQUIPT.
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WRAPPING EQUIPT.
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HIGHLIGHTS OF THE EQUIPMENT:

MOGUL EQUIPT.
3 National (M-100) Mogul Machines, complete with depositors, stackers, loaders & conveyors, with accessories.

ENROBING DEPT.
11 Greer Coaters (CG 32", S24", PF1) complete with feeder & bottomer, tunnels, controls, motors and electrics.
35 Chocolate Jacketed Holding Tanks to 4000 lb. cap. with agitators & drives.
8 National Chocolate Mixers.

ENROBER PACKING
7 Greer Vibra-Packers.

NUT COATING DEPT.
Revolving S.S. Coaters, Grinders, Blanchers, Roasters, Nut Coolers, Conveyorized Inspection Tables, etc.

STARCH DEPT.
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Pulverizing – Pressing & Bulk Packaging Machines.
Cake Breakers & Pulverizers, Anderson Oil Expellers, Butter Presses & Filters.

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Racine Lolly Pop Machine; Racine Continuous Cutters; Filled Center Machines; Ball Machines; Hard Candy Mixers; Candy Pullers; Cooling Tables; Sizers; Cutters; Hand Rolls; Creme Beaters, etc.

CANDY COOKING DEPT.
Vacuum Candy Cookers; Jacketed Candy Cookers; Candy Kettles; Jacketed Carmel Cookers; Breakers & Remelters; Mixers; Beaters; Cooling Tables; Storage Equipment; etc.

SYRUP DEPT.
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Twist Wrappers.
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FACTORY HANDLING EQUIPT.

BOX FACTORY & WRAPPING EQUIPT.
5 Kingsbury & Davis High Speed Quad Stayer Machines.
Stokes & Smith High Speed Wrappers.
Quad Corner Cutters & Automatic Gluers.
Wire Stitchers and Paper Cutters.
Jersey Edge Mounting and Wrappers complete with stayers, mounter & glueing equipt.
Fully Automatic Box Making & Wrapping Machines with conveyors, gluers, etc.
Du Mohr Doming Machines.
Wrapping Machines, Automatic Gluers, Tieing Machines, Extension Edge Machines, Double & Single Scorers, Wire Stayers, Notchers, Corner Cutters, Edgers, Paper Baler, etc.

CORRUGATED BOX MACHINE
Colt Rite Automatic Corrugated Box Machine Complete.

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6 Miehle 29, V50, 45 Letter Presses.
3 C & P Super Press with Gold Leaf Attachment.
2 Kluge Platen Presses.
Keese Automatic Sealer (2 color).
Multilith, Slitters, Cutting Machines, Punches, Power Paper Sheers, etc.

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OFFICE MACHINES AND EQUIPT.

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FOR THE COMPETITIVE EDGE IN PACKAGING, CALL A-C-T...ALUMINUM CONSULTING TEAM

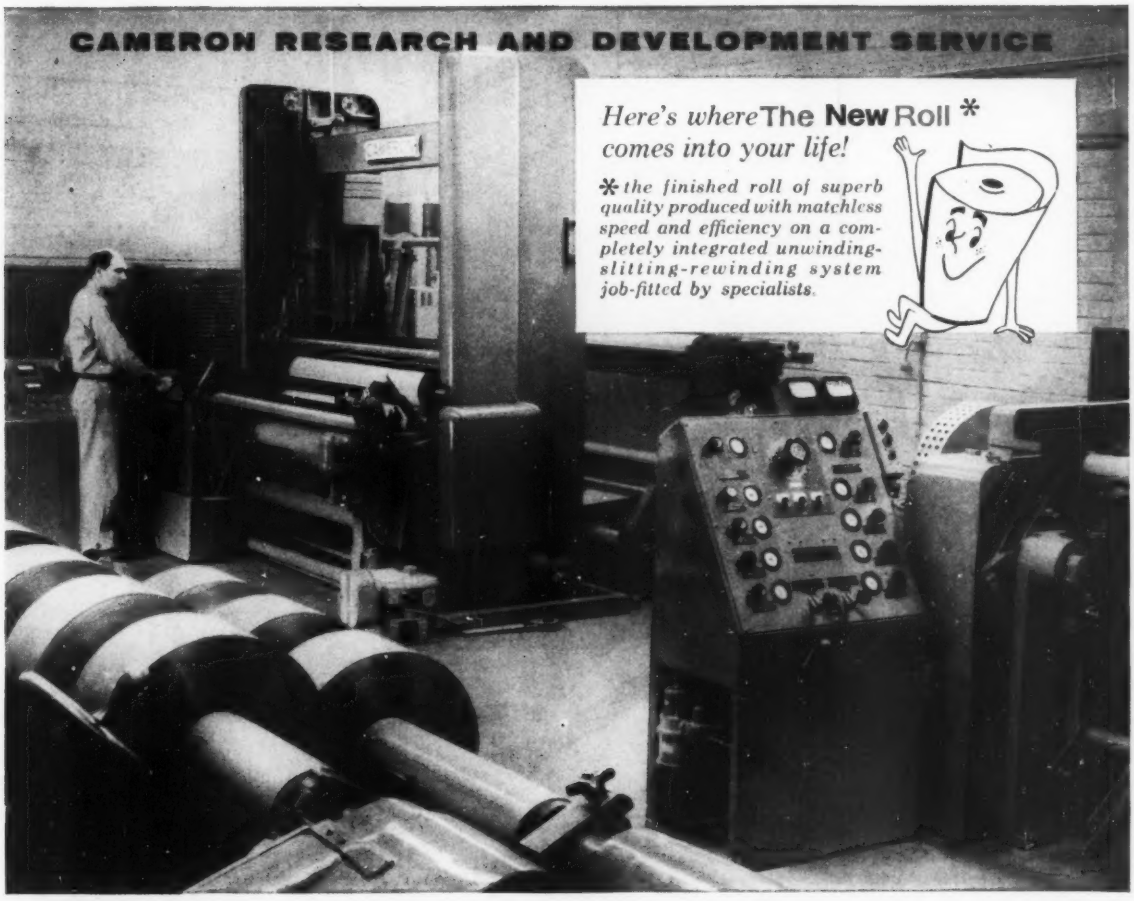
A-C-T is a team of experts specializing in aluminum packaging. In it are five groups of specialists offering 12 integral services in Package Development, Package Design, Process Development, Package Equipment, Research and Food Technology. Coordinating all work of A-C-T is the Clearing Committee, but the focal point for A-C-T services is your local Kaiser Aluminum representative, "The Man on A-C-T".

Here's how it works: You want the competitive edge in packaging. You call in A-C-T. ■ Immediately your packaging problem is assigned to the group of specialists best qualified to solve it. ■ Suppose it's Package Development. Industry experts will cover all phases from functional design, specification, prototype construction, testing, even to pilot production. ■ They work with converters to assure practical production, with end-users to assure competitive advantages at point of purchase.

Regardless of your packaging problem there is an A-C-T specialist group to do the job successfully without cost or obligation to you. Take advantage of A-C-T service now. Phone or write A-C-T, Flexi-Packaging, Kaiser Aluminum & Chemical Sales, Inc., Kaiser Center, 300 Lakeside Drive, Oakland 12, California.

KAISER ALUMINUM

"New leadership in the world of aluminum"


CAMERON RESEARCH AND DEVELOPMENT SERVICE
Here's where The New Roll * comes into your life!
* the finished roll of superb quality produced with matchless speed and efficiency on a completely integrated unwinding-slitting-rewinding system job-fitted by specialists.

NOW... see and try before you buy

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Test-run your materials on a job-fitted "pilot" roll production system, perfectly integrated from unwind to rewind, engineered by specialists to meet your most exacting requirements—to give you The New Roll!

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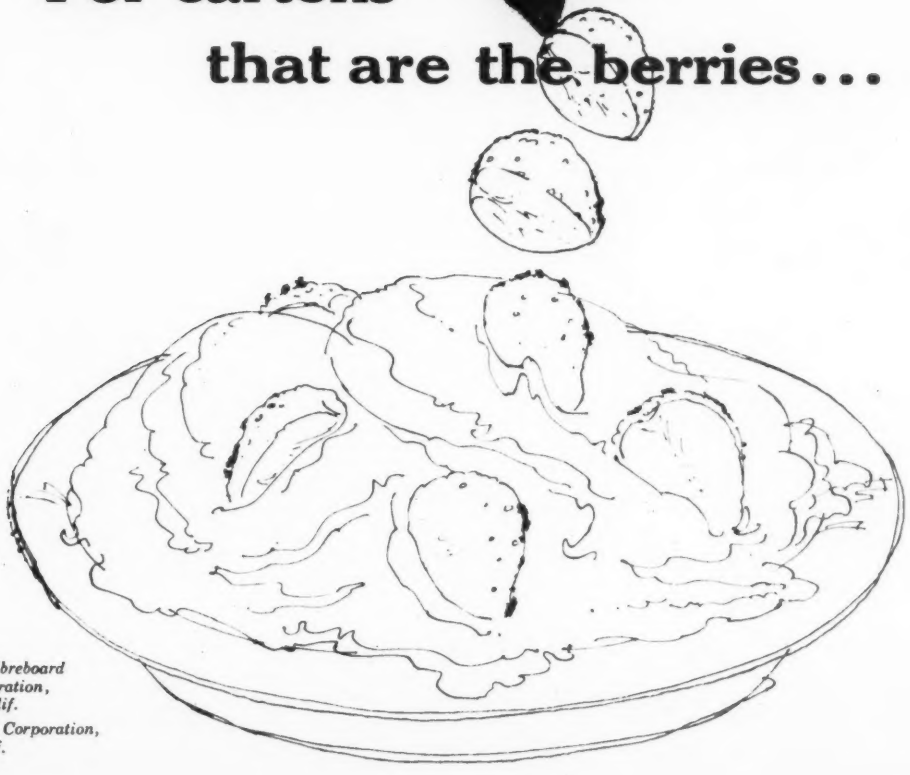
For cartons that are the berries...



Strawberry carton, by Fibreboard Paper Products Corporation, San Francisco, Calif.

Lids by Mutual Plastic Mold Corporation, South Gate, Calif.

for lids that are the tops

ALATHON®

the polyethylene resins that bring new versatility to packaging

The right polyethylene coating resin to make a frozen food package easy to seal, easy to open and liquid-tight . . . the right polyethylene molding resin to make a colorful tight-sealing lid for an ice cream container . . . you'll find both in the variety of dependable Du Pont ALATHON polyethylene resins. You forestall trouble and disappointment *at the source* when you specify an ALATHON resin for your package.

Through careful study and control of molecular structure, Du Pont research has been able to develop a family of polyethylene resins that meets the needs of protection, convenience, sales appeal and economy—so important to the food packaging industry, and to others as well. Ask your converter or package manufacturer about the formulation of ALATHON that best meets *your* needs—in coatings or blow-molding or thermoforming applications. Or write to the address below:

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NEW SWIRL CAP FOR REXALL. This new cap has a lot more than graceful good looks to recommend it. Carefully engineered for maximum strength, it can take all the punishment high-speed capping machines can dish out. Color? A rainbow of colors to suit your taste. This handsome "Swirl" cap is the latest in the industry's broadest line of stock plastic caps. Picture it on your package. Better still, sample it. Samples are as near as your Armstrong man . . . and your telephone.

Armstrong PACKAGING

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Background for Packaging

Notes, quotes and comments. An editorial feature

Significant news for packagers lies in the current evidence that important packaging materials are meeting resistance trying to break above present price levels. In two instances—polystyrene and polyethylene—a leading resin producer announced higher prices, then had to retract when the rest of the industry refused to follow suit. However, glass-container makers say that the price boosts are "inevitable" soon, following the March 1 industry wage hike. *Note:* The first indication of improving business may signal a wave of price increases in many types of materials and containers which are now struggling to show a profit.

Price problems of the container-supplying industries are explained by *Value Line Investment Survey* as a matter of rising costs rather than falling volume. Competition is currently so strong among traditional packaging materials and from the newcomer, plastics, that product prices have not been adjusted sufficiently to recoup higher production costs. "Glass and metal containers," says *Value Line*, "are locked in a big tussle for the beer and soft-drink markets, while blow-molded plastic containers in exotic shapes are threatening to pre-empt many markets for small glass containers." A fairly strong upturn in demand for paperboard products is expected as soon as the general economy begins to show a healthier tone.

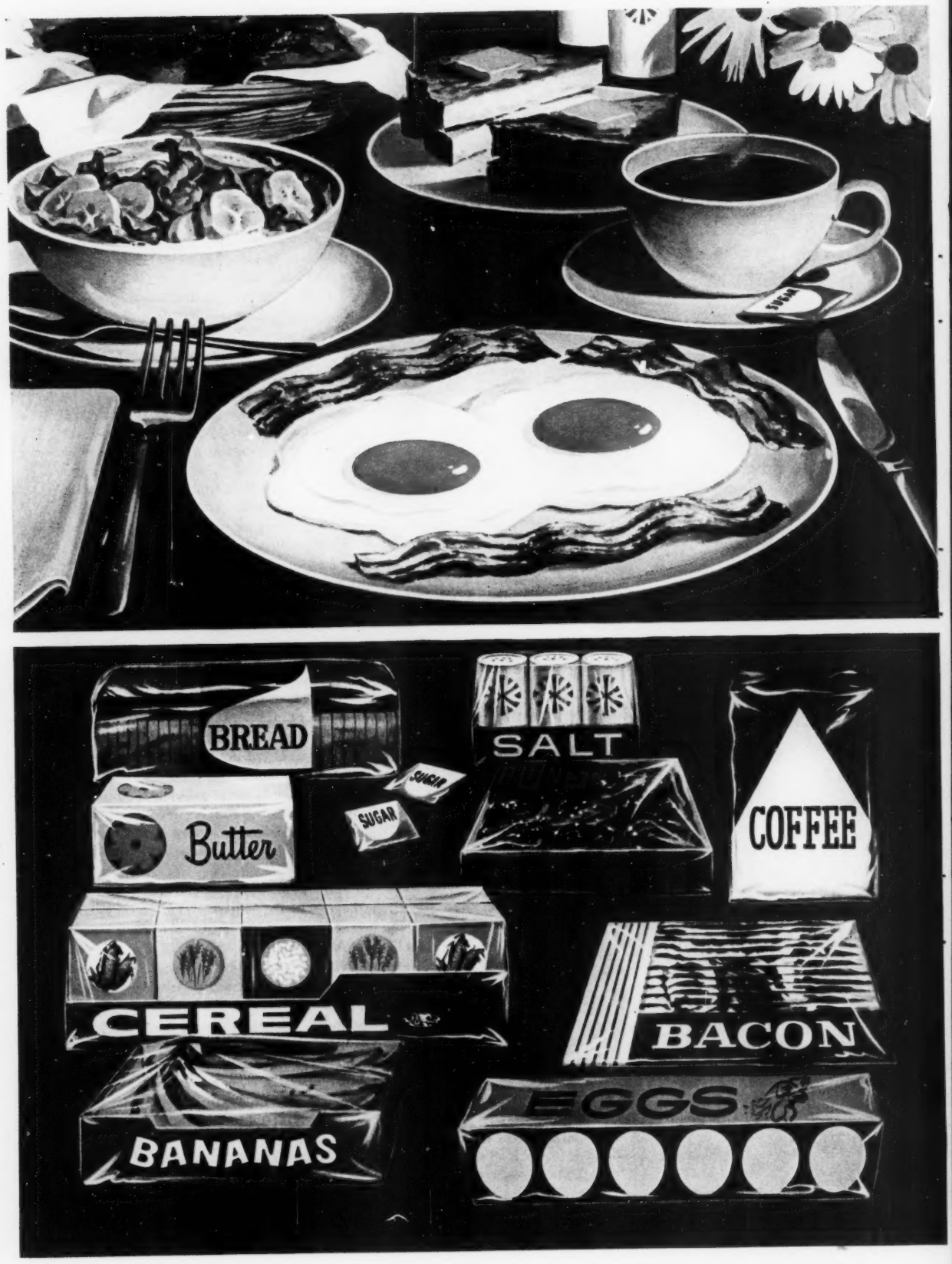
Synchronization of program at next fall's Packaging Institute Forum will be attempted for the first time, to counter criticism of overlapping concurrent sessions. According to present plans, each paper will be allotted an agreed-upon number of minutes for delivery and for questions and answers. With each paper in each concurrent session starting and ending at the scheduled time, registrants will be free to move from one session to another as their interests dictate. Theme for the 1961 Forum: "The Broadening Horizons of Packaging Technology."

Population explosion looms for the packaged pet-food market, too. This market could well be the sleeper of the '60s, says *Progressive Grocer*, since the dog and cat population, now 54 million, is growing six times as fast as the human population. The volume of packaging required is indicated by the fact that in 1959 dog-food sales alone amounted to $340 million and outstripped baby-food sales by more than 16%. Sales of canned cat food added $60 million to the total volume.

There's a lesson for all packagers in the situation now faced by the liquid-detergent makers. The first to go into high-density polyethylene bottles found sales immediately spurting. Now that practically all brands are in plastics, the consumer has less basis for choice, and package design and brand promotion once more will be decisive. A recent survey by Owens-Illinois in this field showed very little brand loyalty: 41.1% of users questioned had no strong preference for any brand.

Indication of growth in boil-in-bag packaging is the impending formation of an industry group to be called the Modern Foods Council, to embrace both makers and users of such packages. The organizing group will meet in Dallas, March 5. First item on the agenda: to establish a better generic name for the package. Likely bet: "aqua-pack."

Latest figures on convenience products (instants, concentrates, cake mixes, etc.) show that they are growing 10 times as fast as conventional packaged grocery products. Other highlights from [*Continued on page 42*]


BREAD
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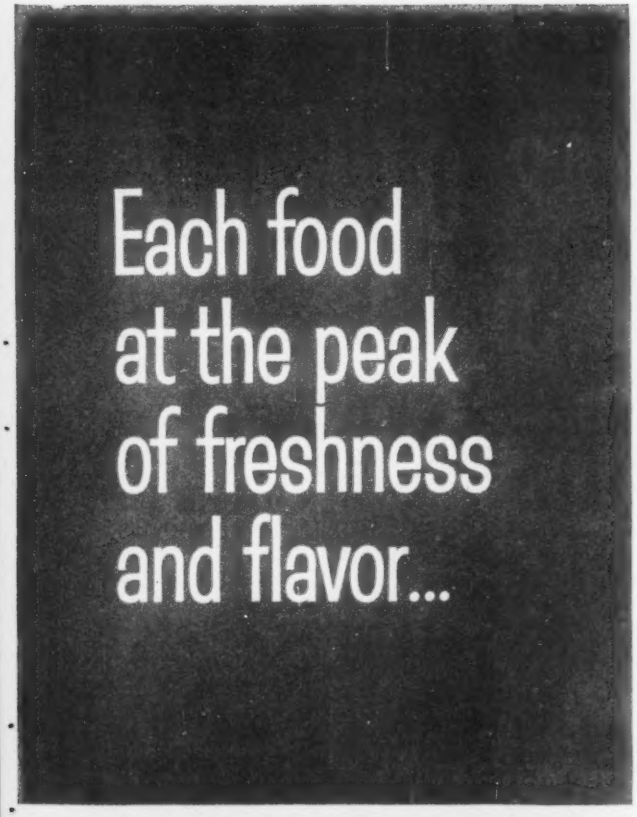

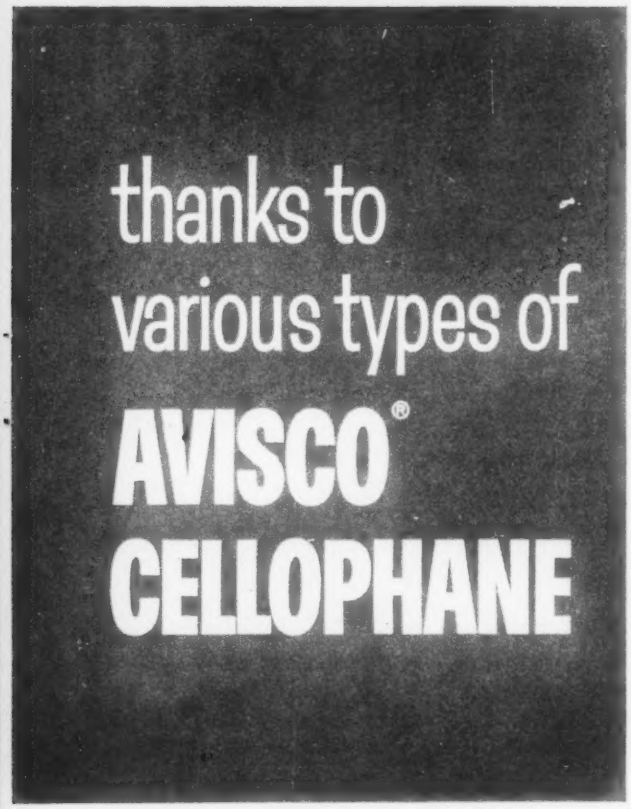

Cellophane is the *only* packaging film that provides maximum protection for *all* of the products shown here, and *hundreds more.* For cellophane is not merely a single film, but a *family of films.*

There are many types of Avisco cellophane—each one tailored to meet a *specific* product requirement. For example, bananas require a packaging material that breathes; bacon and sweet doughs need a film that resists grease; cereal requires moisture-proof protection; coffee requires maximum flavor and aroma retention. There are types of Avisco cellophane for *all* these purposes and *many others.*

What's more, only cellophane offers the combination of low initial cost, pure transparency and sparkle, superb printability, and unmatched performance on packaging machines. The result? *Total packaging economy.*

Get all of these benefits in packaging *your* product. Contact us for an appointment with our representative in your area or a selected cellophane converter specializing in your field.

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Continued from page 39

a *Nielsen* survey of packaged foods in 1960: New or improved brands grew eight times as fast as all commodity sales; the lion's share of the consumer's food dollar is spent on the major advertised brands; larger-sized packages are presently in greater favor than they have ever before been.

Fluorescent inks have penetrated to the cereals field, with recent appearance on "Post-Tens" variety pack. Will other cereal packagers follow suit? The glowing colors have a record of quickly penetrating competitive product fields in which they gain an entry, as has been the case with cartoned soap products. A vast number of shades and combinations of fluorescent inks is now available, including pastels.

The disappearing drug store has become a matter of concern for the House Select Committee on Small Business. According to the committee report, about 98% of all supermarkets now sell health and beauty aids. Food stores sell about 43% of all dentifrices, 41% of baby powder, 37% of razor blades. Items once considered drug-store lines now account for about 44% of the food-chains' volume in the field of non-foods—about $750 million worth. The report also notes the direct acquisition of several drug chains by the retail grocery chains.

New formulations of paperboard to comply with F&DA requirements for food uses are beginning to appear. One approach is a blending of virgin pulpwoods to get improved performance characteristics. An example is "North Brite" board, produced by Packaging Corp. of America by blending cold soda pulp with bleached kraft pulps; although thin and lightweight, the blended solid sheet, according to the company, provides high strength and rigidity for food and drug cartons, food plates and trays.

Competitive battle between steel and aluminum came into the open at Canners Show in Chicago. The fight centers at the moment on three products: motor oil, frozen citrus concentrate and seafoods. Aluminum now claims 30% of retail motor-oil cans, predicts 60% of frozen citrus concentrates this year. But with new "thin tin" (now produced by six companies), price figures are very close. Indications are that aluminum makers are fighting a losing battle on motor oil, would gladly settle for a thin-tinplate can with aluminum ends. However, the aluminum men are keen about shallow-drawn, pre-coated aluminum cans for the packaging of fish, where they believe they have a real price advantage.

The 'handy' beer bottle (often called the "glass can"), introduced nationally in the first quarter of last year, already has become the most frequently formed glass container in the world, according to *Carl R. Megowen* of Owens-Illinois. The squat, amber bottle with rounded body and cone-shaped shoulders made up the major share of one-way beer (and beverage) bottle shipments, which reached nearly two billion units in 1960. Total shipments of all glass containers in 1960 were about 22.6 billion units, up 600 million over 1959.

Look for major reshuffling of packaging management in one of the biggest packaged-food companies. Indications are that the company is going all the way toward centralized management of the packaging operation from staff level, after making tentative moves away from strict decentralization in divisional groups which prevailed for years. Staff groups that are concerned with problems related to packaging, marketing and distribution will be controlled by a single executive vice president.

HERE'S HOW TO SAVE MONEY... MINIMIZE WRAPPING MACHINE SLOWDOWNS and HEADACHES!

HERE'S HOW

KEHR Produces Wrapping Materials (Heat Seal . . . Moisture Proof) To Give You Trouble Free, Economical Operation!

KEHR Solved Burry's Problem . . .

Cleaning slowdowns and shutdowns often required in automatic wrapping machines was overcome in Burry's "Pop Treat" packaging by Kehr's exclusive high-gloss, heat-seal coating applied to both sides of a super-calendered opaque sulphate. Kehr can be equally inventive in solving similar production problems for you, as well as increasing the eye-appeal of your package . . . whether it's heat-sealing paper, cellophane, foil or wax papers.

WRITE, PHONE OR MAIL COUPON FOR KEHR'S ANSWER TO YOUR WRAPPING MACHINE PACKAGING PROBLEMS!

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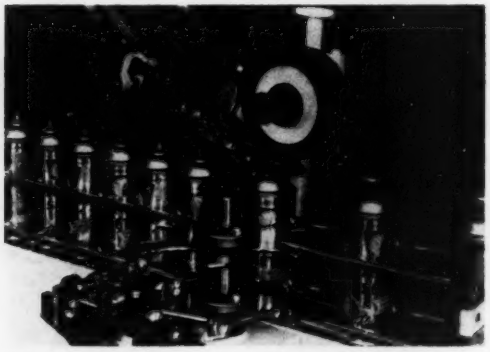
EQUIPMENT & MATERIALS

Automatic aerosol overcapper

Pneumatic Scale has developed a fully automatic overcapping machine for aerosol containers. It is rated at speeds from 120 to 200 containers per minute, and can be geared to slower speeds as required. The new unit consists essentially of an overcap feeder working in conjunction with a



straight-line conveyor and power-driven dial for container control. The conveyor and star wheel move continuously to push containers through the cap-chute release point. As illustrated, each container strips off its own closure, then moves under a rubber-faced spring-mounted wheel which seats the cap tightly. The overcapper has been designed to apply a wide range of closures and can handle a variety of container sizes and shapes with a minimum of special parts, says the supplier. It can also be used to apply friction closures to containers other than aerosols. *Pneumatic Scale Corp., Quincy, Mass.*

Adjustable cartoning machine

Container Equipment Corp. is marketing a new addition to its line of cartoning machinery. The new model, No. 40-LL, is an adjustable cartoner which is designed to handle base-lock cartons, such as are used for a variety of food products. It differs from the supplier's other Series 40 models in that it handles the carton fully automatically from hoppering through closing. For additional information on this new adjustable cartoning machine, contact *Container Equipment Corp., Bloomfield, N.J.*

Cellophane for meat wrapping

A polyethylene-coated cellophane, suitable for wrapping all fresh red meats, is offered by Olin Mathieson. Called Olin 300 OF-18, the tough film is claimed to extend product shelf life and to cut down on re-wraps. The chief advantages reported for the material are durability and stability. It also is reported to have excellent moistureproofness, which protects meat against shrinkage and weight loss while retaining its fresh appearance for longer periods. The material's dimensional stability, clinging quality and ability to remain clear under humid display conditions make it an eye-catching meat package, says the supplier. The sealable film is available in sheets or rolls. *Olin Mathieson Chemical Corp., Packaging Div., 460 Park Ave., New York 22.*

Polystyrene overwrapping film

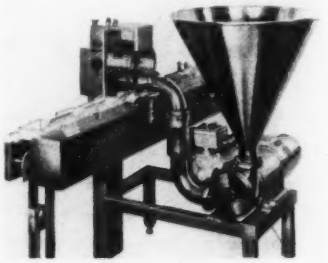
New from Visking is a biaxially oriented polystyrene film, designed for overwrapping and other packaging applications. Marketed under the Visolyte brand name, the clear, crisp-textured film is reported to be low in cost. It is offered in gauges ranging from ½ to 2 mils and in widths up to 46 in. Among the properties of the film, as cited by the supplier, are: excellent machinability and printability, easy removal when used as an overwrap, no blocking problem and superior low-temperature performance. The film can be adapted to such packaging uses as windows for display cartons, overwraps for tubed tomatoes and other products, and as a lamination to high-impact polystyrene for decorative trays. The material's "breathing" characteristic makes it ideal for produce packaging, says the supplier. Details are offered by *Visking Co., Div. Union Carbide Corp., 6733 W. 65 St., Chicago 38.*

Aluminum bottle closure

Alcoa is marketing an aluminum closure which is said to be ideally suited to the sealing of juice bottles. Called the Topside RO, the closure is of the short-skirted, twisting type. It is applied by a roll-on technique in which top pressure is applied and rollers close in from the sides to mold the cap to the threads of the glass finish. This double seal enables the cap to maintain a positive vacuum for product protection during long shelf life, the company notes. Economy is among the features cited for the closure. Its superior sealing characteristics, says the supplier, permit the use of a thinner, less costly liner. The corrosion-resistant cap is reported to be easy to remove and to replace. *Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19.*

Frozen-food filling unit

Anderson Bros. introduces the Model 382 frozen-food filler, an automatic, compact unit that is claimed to operate at speeds ranging from 100 to 200 packages per minute. The machine is suggested for use in filling such products as squash, spinach, creamed corn and other frozen foods into open-top cartons. The machine's gentle filling operation will not damage the product even when running at top speed, says the supplier. A rotating filler head, timed with and from the box-opener, deposits an accurately measured fill into each carton conveyed beneath it. Packages move steadily through the filler with no stops, the manufacturer reports. *Anderson Bros. Mfg. Co., Rockford, Ill.*



Granular hot-melt adhesive system

What is described as a completely new granular hot-melt adhesive system—consisting of an Instant Lok hot-melt applicator and the Instant Lok line of granular hot-melt adhesives—has been developed by National Starch's National Adhesives Div. and Potdevin Machine Co. The jointly developed system will be sold and serviced by National Adhesives. The system consists of a granular hot-melt adhesive which is placed in a hopper and pre-melted by passage through a heated extrusion unit. The adhesive is then applied to the packaging material's surface through any of various specially designed nozzles and applicators. Among the advantages reported for the system are: the use

ANNOUNCING

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Visolyte

Polystyrene film

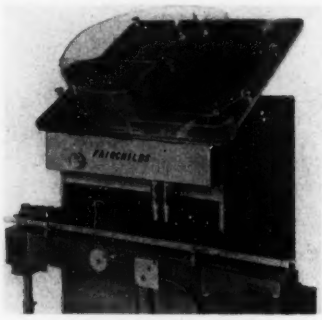
by VISKING

UNION CARBIDE

of 100% solids material, thereby eliminating the cost of solvents and reducing container costs, transportation charges and storage space; rapid start-up and elimination of the need for drying and compression units, and elimination of the need for daily machine clean-up. Among the applications suggested for the system are carton forming and sealing or any converting operation where adhesive application requires instantaneous tack. *National Starch & Chemical, National Adhesives Div., 750 Third Ave., New York.*

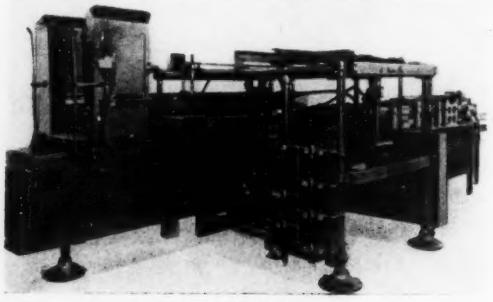
Variable-speed counter and filler

New from Fairchild's is the Model 33-A automatic electric counting and filling machine for such small parts as tablets, capsules, seeds, buttons and candies. Featuring twin delivery chutes, the new unit counts and fills a predetermined number of pieces at speeds which are reported to range up to and above 80 containers per minute, depending on part size and count. The machine has a variable-speed, rotating counting disk which is mounted on a stainless-steel table top. The 33-in. disk has a number of counting holes which are designed to segregate products in specified numbers for filling. Each disk is custom-made to the counting requirements of the user. The counting disk is fed from a large-capacity transparent plastic hopper, permitting visual control by the machine operator. The machine's table top can be tilted (from 18 to 49 deg. of elevation) to facilitate distribution of products. Two independent vibrators help in this operation. The two delivery chutes which carry the product from the counting disk to the containers are tapered to receive adapters that permit the filling of containers of varied aperture and height. *Fairchild's, Inc., 4864 Eagle Rock Blvd., Los Angeles 41.*



Case set-up and packing unit

Designed for use by canners is A-B-C Packaging Machine's new automatic Case Set-up and Packer. The machine has a pneumatic three-lane divider and a feathered pusher for loading. It offers production of 25 cases per minute without operator, says the company. Cans are fed to the machine in single file and are pneumatically positioned in the proper lane. Lock-outs hold back the cans in each lane to await loading by a feathered pusher. After loading, the next empty case is fed in immediately. All operations are electrically interlocked. The machine is adjustable to pack gallon and 5-quart cans into end-opening cases. *A-B-C Packaging Machine Corp., Tarpon Springs, Fla.*



One-way soft-drink bottle

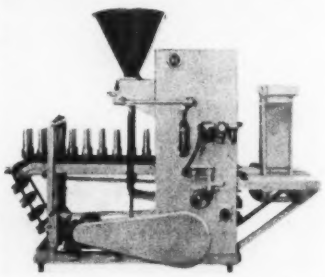
Thatcher Glass introduces a stock disposable, no-deposit soft-drink bottle. Designated style No. 4077, it is available in 10-, 12-, 16-, 24-, 28- and 32-oz. sizes. The standard 12-oz. bottle in the new line weighs 7 oz., stands 6 27/64 in. high and is 2 45/64 in. in diameter. The words "no return" and "not to be refilled" are blown into the shoulder and base of the bottle, respectively. For details, contact *Thatcher Glass Mfg. Co., 375 Park Ave., New York 22.*

Labeler for rectangular cans, cartons

Rectangular cans and cartons are labeled automatically on Pro-Pak's new Banks labeling machine. Labels up to 16 in. long by 8 in. wide can be applied by the machine to one or more sides of the container or overlapping the side panels, if desired. The new unit handles cartons ranging in size from 5 in. long by 5 in. wide by 6 in. deep to 18½ in. long by 13½ in. wide by 9½ in. deep. F-style cans of 1-gal., 5-gal. or other capacities can be accommodated. The supplier suggests that the labeling machine can be used to change can or case appearance for special merchandising events, such as seasonal promotions. Machine accessories include a label-dating attachment, a gluer and sealer, and a no-container-no-label control. *Pro-Pak, 5105 S.W. 45th Ave., Portland 1, Ore.*

Viscous-product cartridge filler

A machine that automatically fills cylindrical cartridge containers with grease, oil, ink or other viscous, semi-liquid or semi-solid products is offered by The Filler Machine Co. Called the Geyer CF-60, the unit handles containers of 2-in. diameter by 9-in. length, and similar sizes. Featuring automatic piston filling, it is reported to operate at a rate of 20 to 80 containers per minute. A two-line model (illustrated) and a four-line model are available. The former has a top speed of 40 units per minute. Among the features of the new machine are: no-cartridge, no-fill protection; bottom-up filling to prevent air pockets, and automatic lid pressing, for uniform, accurate closing. The hopper has a 28-gal. capacity. *The Filler Machine Co., 10 Penn Ave., Philadelphia 11.*



Polyethylene and polystyrene developments

Recent additions to Dow Chemical's line of plastics materials include a family of five polyethylene blow-molding resins, two new film-grade polyethylene resins, internally colored expandable polystyrene pellets and a fog-resistant polystyrene film. The blow-molding resins are designated: 410M (0.917 density; 1.5 melt index), 400B (0.920 density; 1.5 melt index), 510E (0.919 density; 2.0 melt index), 200B (0.923 density; 0.7 melt index) and 550E (0.925 density; 2.0 melt index). The new film-grade resins are designated 555E and 222E. The former is suggested for overwrap applications where machine handling is critical. With a density of 0.935 and a melt index of 2.5, it is claimed to offer high clarity and gloss in film form, with exceptional stiffness. The latter (0.935 density; 0.9 melt index) is reported to produce a clear film with a satin-like surface sheen. It also is suggested for overwrap applications. The supplier's internally colored expandable polystyrene pellets are trademarked Pelaspan 101. Cylindrical in shape and uniform in size, they are available in red, green, blue, yellow and black, as well as natural white. Parts molded of the pellets are reported to remain color fast. The fog-resistant

[Continued on page 158]

GAYLORD designs out the extras

Last year, a certain manufacturer used a shipping container with 21 interior pieces. Although it was effective, assembly costs were high, so the container was presented to Gaylord designers for revision.

Result: a container with only 9 interior pieces, that has less tare weight, makes assembly easier, and reduces packaging costs 33⅓%.

Simplify *your* packaging problems. Let Gaylord design the extra pieces, weight, trouble and cost *out* of your corrugated containers. Call your nearby Gaylord Man today.

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If you use large quantities of telescope cans, here is important dollar-saving news for you! Through new manufacturing techniques, R. C. Can is now able to bring you a brand-new price schedule. Here are the R. C. Metal-End Telescope Can specifications:

- Any size from 3/8" to 6 3/8" diameters
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- Spiral wound with metal ends
- Can be telescoped (divided) at any point
- Wide variety of greaseproof or moistureproof wrappings and linings.
- Spiral-wound labels can be applied with perfect label registration.

...and Don't Forget These Other Low-Cost R. C. Telescope Cans...

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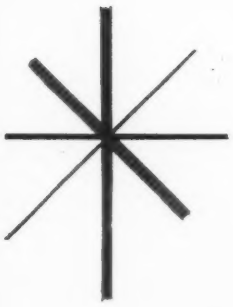

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Labels by Steigerwald

Fine labels of all kinds at reasonable cost

Heat Seal requires no glue, no water, no clean-up. Ideal for bag headers and containers of practically all shapes and materials. Instantaneous or delayed action. Made to exact specifications, for use with high speed equipment. Continuous rolls or individual.

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Stollmaier & Son, Inc.
Mariemont Center Bldg.
Bramble 1-0222

ST. LOUIS 5, MO.
Marvin Yates Co.
111 So. Bemiston Ave.
Parkview 6-0296

LOUISVILLE, KY.
Practical Products Co.
319 Jefferson St.
Juniper 3-8422

CLEVELAND 21, O.
A. C. Foster
4040 Mayfield Rd.
EVergreen 2-7555

KANSAS CITY 12, MO.
A. B. Mason
4619 Jefferson St.
Victor 2-6580

MILWAUKEE, WIS.
H. C. Lackowski
P.O. Box 62
Garden 5-5850

MINNEAPOLIS, MINN.
J. E. & J. L. Moor
3329 Dupont Ave., So.
Taylor 4-5309

NEW YORK 25, N. Y.
John H. McLaren
500 West 111th St.
Monument 2-0237

DAYTON 6, OHIO
R. L. Callahan
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CR 5-9028

UPPER N. Y. STATE
Frank Goldsborough
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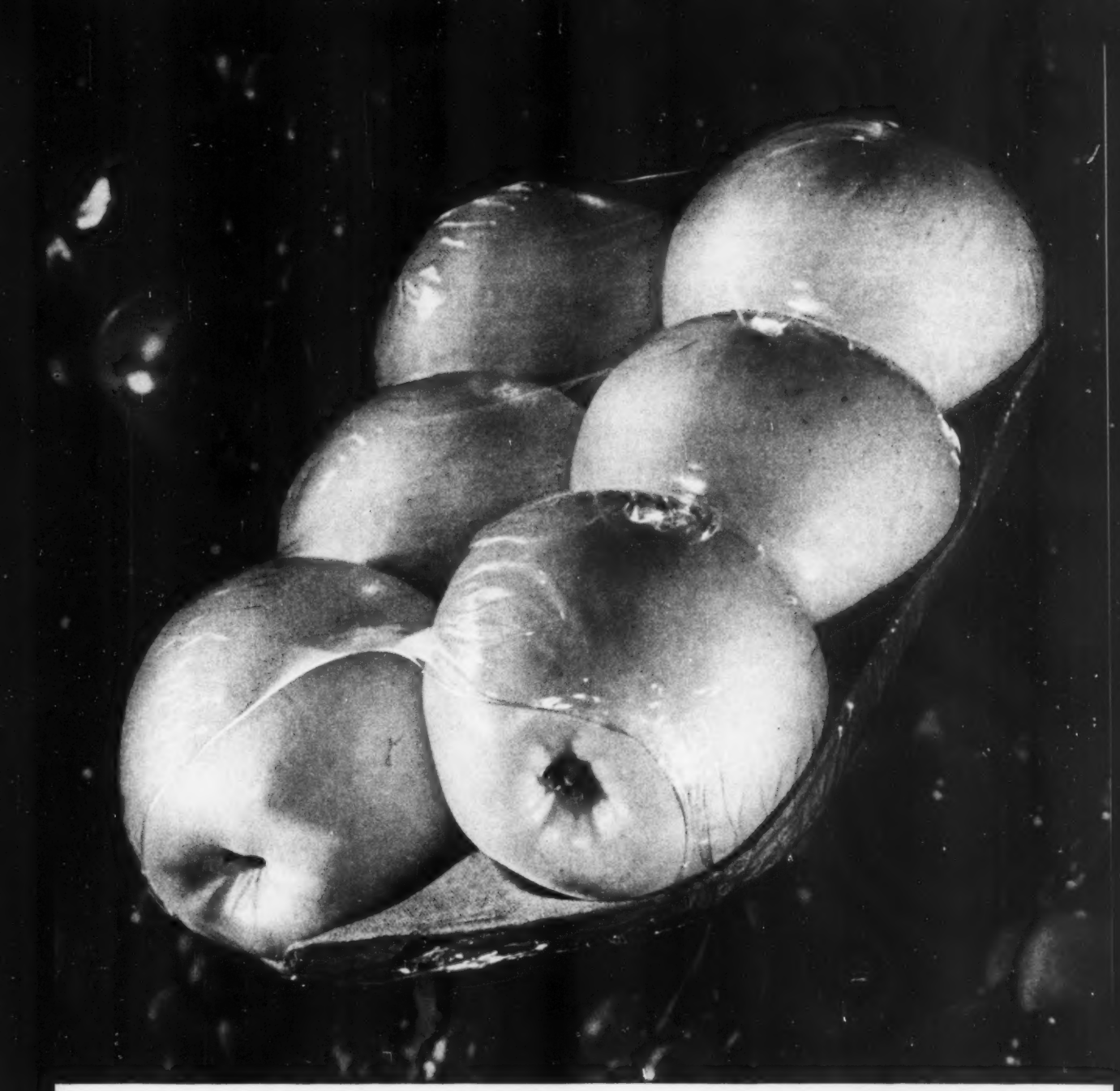
GOLD OR SILVER EMBOSSED • DIE-CUT OR SQUARE • FOIL SEALS AND TAGS • FLAT OR CONTINUOUS ROLLS FOR HAND OR AUTOMATIC USE • HEAT SEAL • PRESSURE SENSITIVE • SPECIAL ADHESIVES



POLYFLEX, THE "BREATHING" FILM, LIFTS SALES...LOWERS COSTS

Crystal-clear Polyflex* film even *sounds* crisp and fresh when touched. Its "breathing" qualities permit uniform ripening, reduce spoilage in transit and on display. Polyflex is heat-sealable and heat-shrinkable on standard equipment. It costs less than most overwraps available today.

• If your product has visual appeal, consider wrapping it in Polyflex. Call the Plax office nearest you, or write:

PLAX

PLAX GIVES A PACKAGE A PLUS

*Polyflex is Plax's registered trademark for its biaxially-oriented polystyrene sheet and film.

PLAX CORPORATION, HARTFORD, CONNECTICUT • In Canada: Plax Canada Ltd., Toronto.

WAKE UP APPETITES WITH FLAVOR APPEALING PACKAGES FROM KVP SUTHERLAND

KVP SUTHERLAND PAPER COMPANY.....

They looked so delicious that Mom bought two ice cream flavors instead of one, three cooky flavors instead of two. The youngsters agreed. And what a party.

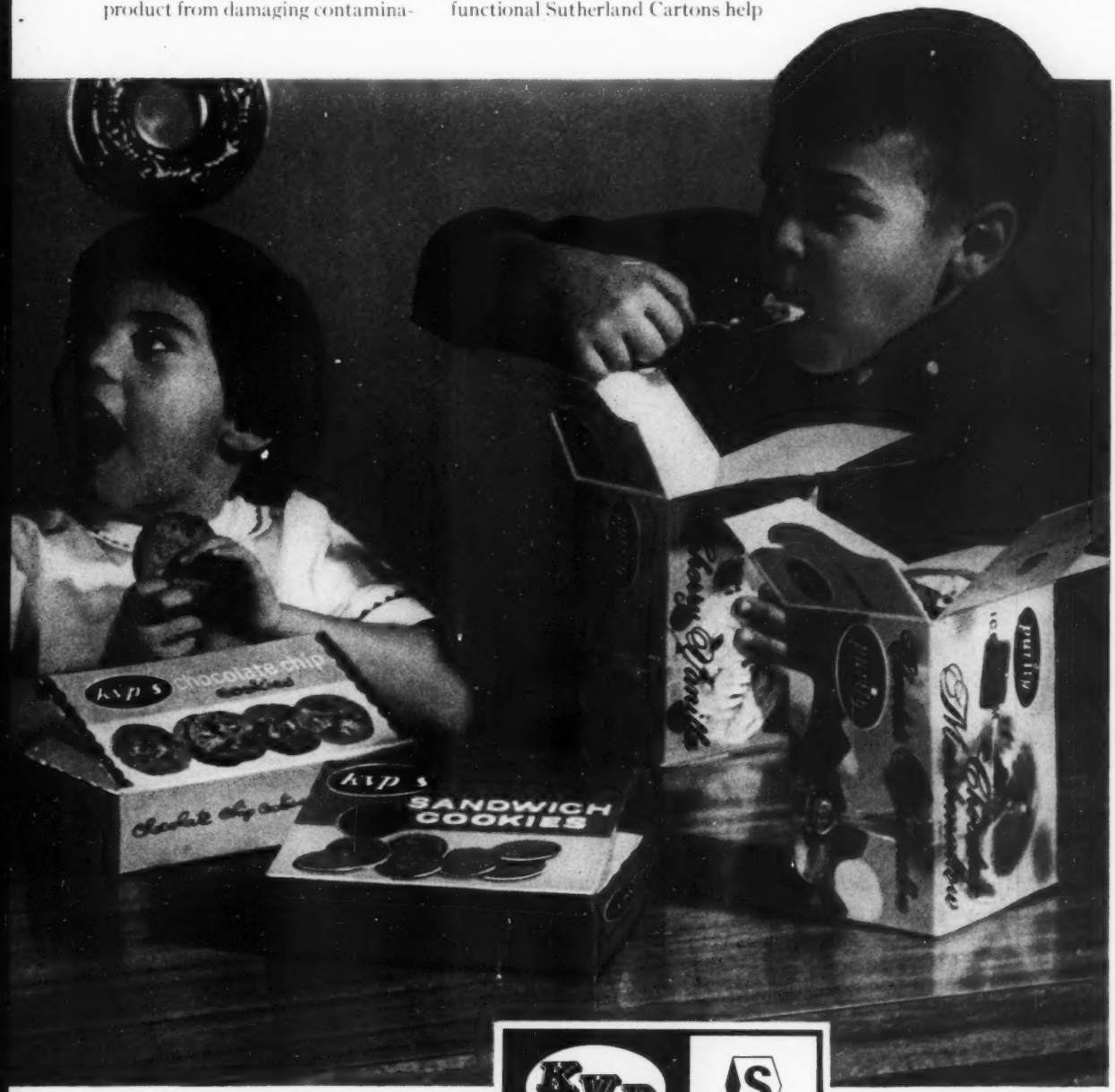
Colorful, flavor appealing pictures wake up appetites, create purchases for sampling. And repeat purchases come because KVP Sutherland packages shield your quality product from damaging contamination, keep your product fresh.

With KVP Sutherland packaging, one glance tells Mrs. Shopper your product flavor. Helps her find her planned purchases, induces unplanned purchases.

Ask about Sutherland Ice Cream Cartons. Here's a handsome family of ice cream flavors tastefully pictured to prompt impulse sales. And functional Sutherland Cartons help keep your production lines operating at optimum efficiency.

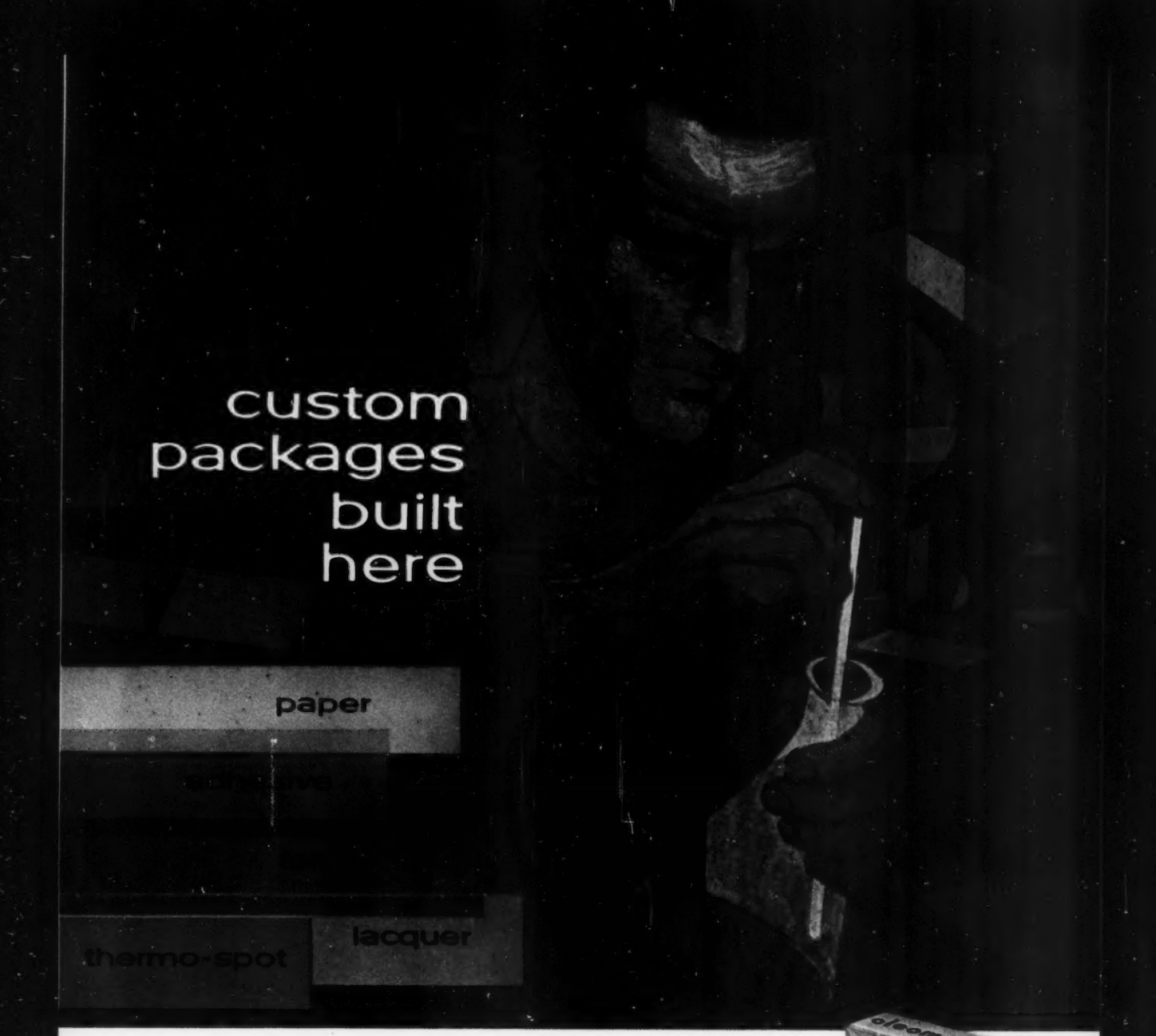
Ask about KVP Impact!®, a medium price luxury overwrap to bring your cookies to life in taste tempting colors. Excellent performance on standard overwrapping equipment.

Whatever your carton, overwrap or innerwrap needs, we welcome the opportunity to serve you.



KVP SUTHERLAND ...the paper people

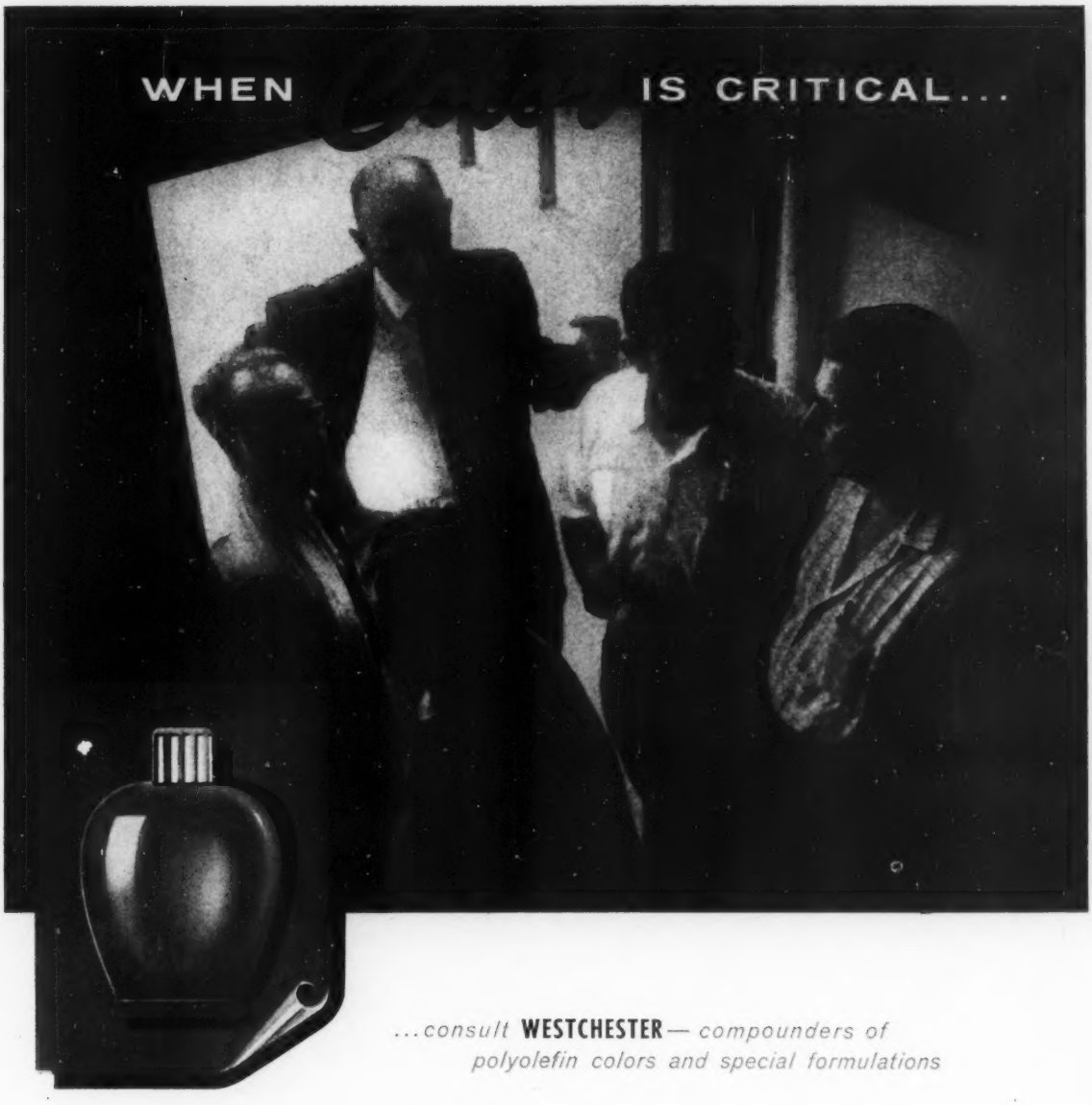
. . . . . Kalamazoo, Michigan



Milprint builds flexible packages to the specific requirements of your product—two layers, or a dozen if need be. At Milprint solutions to package problems are never arranged to favor a particular material or printing process. There's no need to because *Milprint offers you the widest variety available anywhere.* Your next package can benefit from this "open mind" approach by the pioneer in flexible packaging. Your custom combination package will be produced by a nationwide research, design and production organization with 61 years experience. The result? More protection, more sales sizzle for your product at economical cost.
Now is a good time to discover . . .

MILPRINT PACKAGING *gives your product* **MARKETING POWER**

MILPRINT Inc., World's Most Constructive Flexible Packaging Service, General Offices, Milwaukee, Wis., Sales Offices and plants conveniently located across the nation.



...consult **WESTCHESTER** *— compounders of polyolefin colors and special formulations*

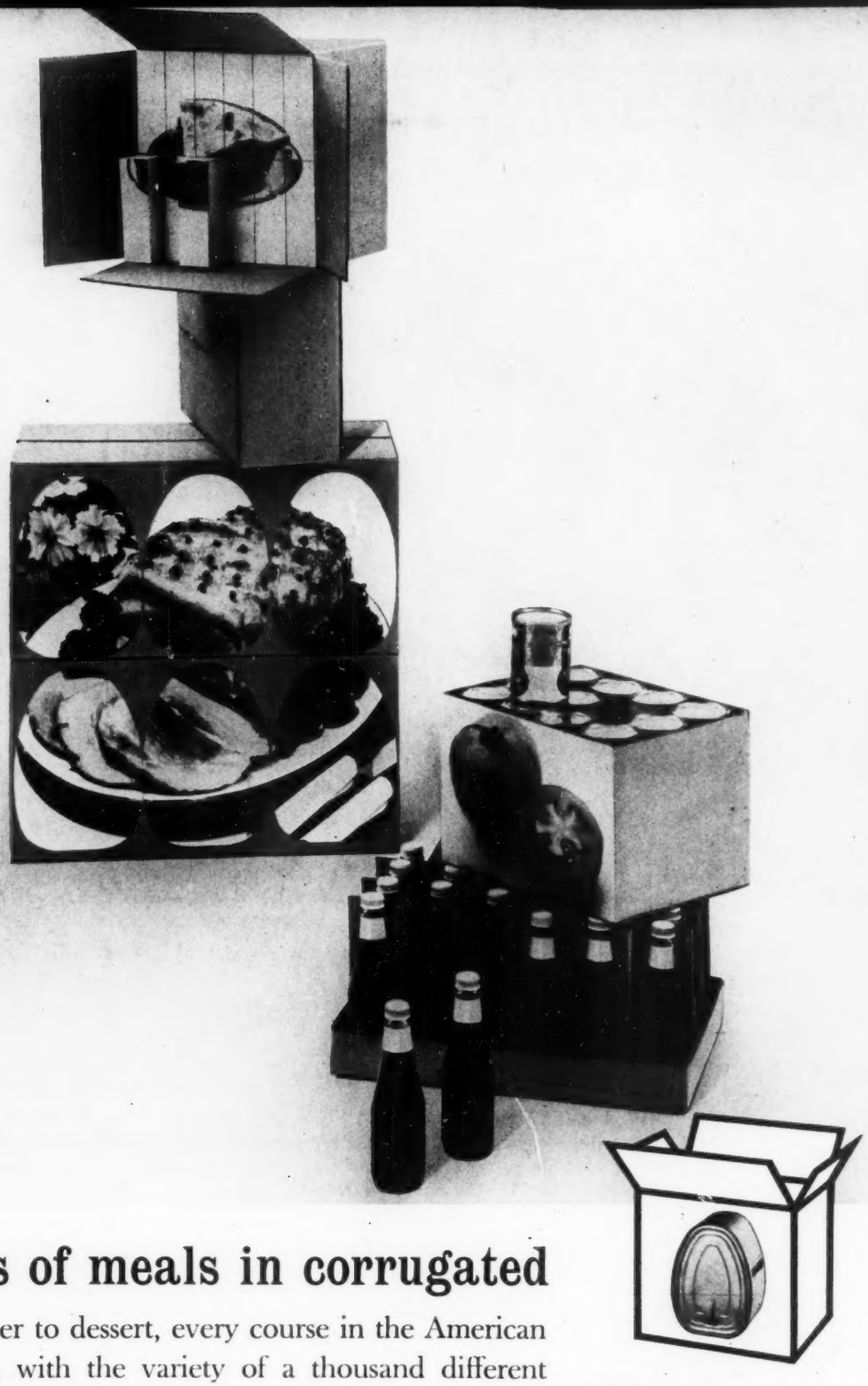
THESE EXPERIENCED POLYOLEFIN COMPOUNDERS work closely with your engineering department . . . developing new colors and special formulations. During the past 14 years Westchester has created more than 4000 color concentrates and pre-mixed color blends – all to special order for injection and blow molding companies, extruders and resin suppliers.

Write now for detailed information on any color or formulating problem involving polyolefins and other thermoplastics.

The new FDA certified Westchester colors are now available. Approved for food, drug and cosmetic packaging – These colors are supplied with a registration number, attesting FDA approval of the pigments!

WESTCHESTER PLASTICS, INC.

326 WAVERLY AVE. • MAMARONECK, N. Y. • Owens 8-7410



Millions of meals in corrugated

From appetizer to dessert, every course in the American menu is rich with the variety of a thousand different dishes, served by the nation's legion of food producers. Many of these leading companies use boxes by Hinde & Dauch. And for good reason: They can rely on H&D to supply money-saving *corrugated containers in volume.*

West Virginia Pulp and Paper

Hinde & Dauch Division

17 Plants • 42 Sales Offices • Sandusky, Ohio

Sounding BOARD

WE ASK THE READERS

As a visitor, what method will you use to get the most out of the AMA National Packaging Show next month?

Thomas M. Glynn
Vice President, Manufacturing
John H. Breck, Inc.
Springfield, Mass.

Our personnel for covering a packaging show comprises the industrial engineer, the packaging mechanical engineer, the purchasing agent and myself. These four people not only have the responsibility for improvements in packaging materials, methods and equipment, but are thoroughly familiar with our company thinking on the current problems to be solved and new equipment and machinery which we are considering for our packaging production lines.

Before the show, we draw up a list of things which we wish to investigate—drawn from descriptions in trade journals of what will be on exhibit—and decide who is to cover each item.

We then make a first tour of the entire show to list the location of the exhibits we have placed on our priority list, plus any other interesting exhibits that we feel we should investigate.

On the second pass through the show, we thoroughly discuss with suppliers the items on our priority list and the other matters of interest which have been discovered in the first tour. At the most, we travel in pairs and do not cover the show as a group.

After show hours, we set up dates with knowledgeable suppliers to discuss in depth the subjects in which we are most interested or to explore further any developments which we may have brushed over lightly at the show. Back at our own plant, we catalog all of the new literature which we have collected and have a joint meeting to exchange information and to plan for our new packaging developments.

Nicholas D. Ellis, *Manager, Package Engineering Dept., Anheuser-Busch, Inc., St. Louis:* I have been attending the AMA National Packaging Show for the past 15 years and each year I come away with the feeling that it was time well spent.

To get the most out of a show of such magnitude, a little planning is necessary. It is best first to go over the list of exhibitors published in the packaging magazines and from this list pick out those exhibitors on which you would like to concentrate or those that have something new to offer. If you are working on a special packaging problem or are thinking in terms of a new packaging material or application, then it may be well to make prior arrangements to meet and discuss this particular problem with one of the technical experts who are available at the show.

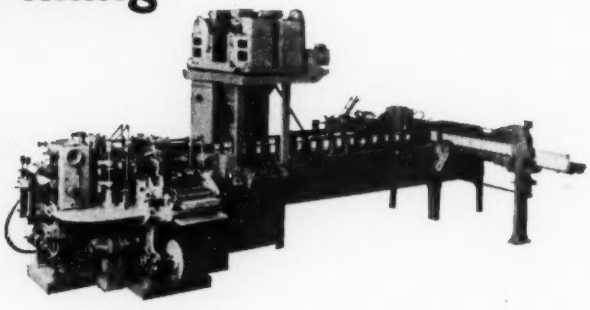
If time permits, plans should be made to spend at least two days at the show, for it is near to impossible to do justice to it otherwise. The first day could well be spent getting an over-all view of the exhibits, whether they apply to one's field or not. Some of the best ideas sometimes come from sources one would least expect and we have found that package developments for one industry can have a carry-over value and may be applicable to other industries. We have also found that a new development or idea which has no immediate application insofar as you are concerned may be just the thing to solve a problem that may come up in the future. For this reason, it is most important to pick up all the exhibitors' literature and file it away for future reference. Also, in visiting the various exhibits, one should not hesitate to ask questions from the various technical experts who are always on hand for this specific purpose.

After all the exhibits have been briefly covered, then one should concentrate on those that specifically apply to his field and make it a point to see those individuals with whom he has made prior arrangements, for the AMA Show provides an excellent opportunity to see old friends and exchange ideas with experts that would otherwise take days to visit.

Carl W. Stursberg, Jr.
Executive Vice President
Warner-Lambert Products Div.
Warner-Lambert Pharmaceutical Co.
Morris Plains, N.J.

I have always attended a packaging show coincidental with a problem with which I was concerned involving a package or package design for a product. Therefore, it seems to me I have always had a real need to attend the AMA Packaging Show. [*Continued on page 180*]

Get fast accurate filling with SIG* Double-Package Makers



If you package dessert powders, cut macaroni products, cereals, dried vegetables, etc. in folding cartons with inner-liners or overwraps, investigate SIG line Double-Package Makers. You will discover this world-famous line can improve your packaging and substantially reduce your costs. Here are some of the advantages you'll get:

Top Speeds—Makes, fills and seals up to 80 packages per minute from approximately 3 oz. to 5 lbs.

Versatile—Models to handle almost any free-flowing or non free-flowing powder or granular product with choice of three filling methods—net weight, volumetric, gross weight with auger feed.

Air-Tight Package – Inner bag formed on exclusive twelve-mandrel system for continuous, unbroken vertical seals . . . and closed independently of carton by heat sealing, glue or with neat, accordion style top fold for easy reclosing. Handles paper, glassine, Pliofilm, cellophane or laminated materials from roll stock. Cartons with glued flaps or tuck-lids formed and sealed from flat blanks. Overwraps from roll stock registered photo-electrically.

Dependable – All models are exceptionally high efficiency, low maintenance machines . . . proven in modern food plants the world over.

**SIG is the trademark of Swiss Industrial Company, Switzerland . . . for over five decades a world leader in precision engineered packaging machines built with unsurpassed skill.*

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION
SIG Packaging Machinery
Distributed Exclusively by
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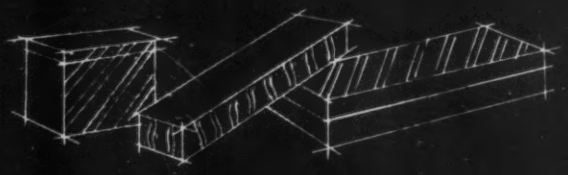
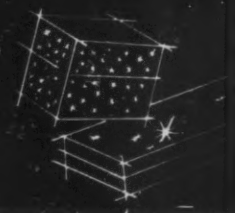
For the whole story, write for fully illustrated literature today.

brings your packaging to life!



Rayz-Brite

FORMERLY "HI-BRITE"



DIMENSIONAL DECORATIVE PAPERS

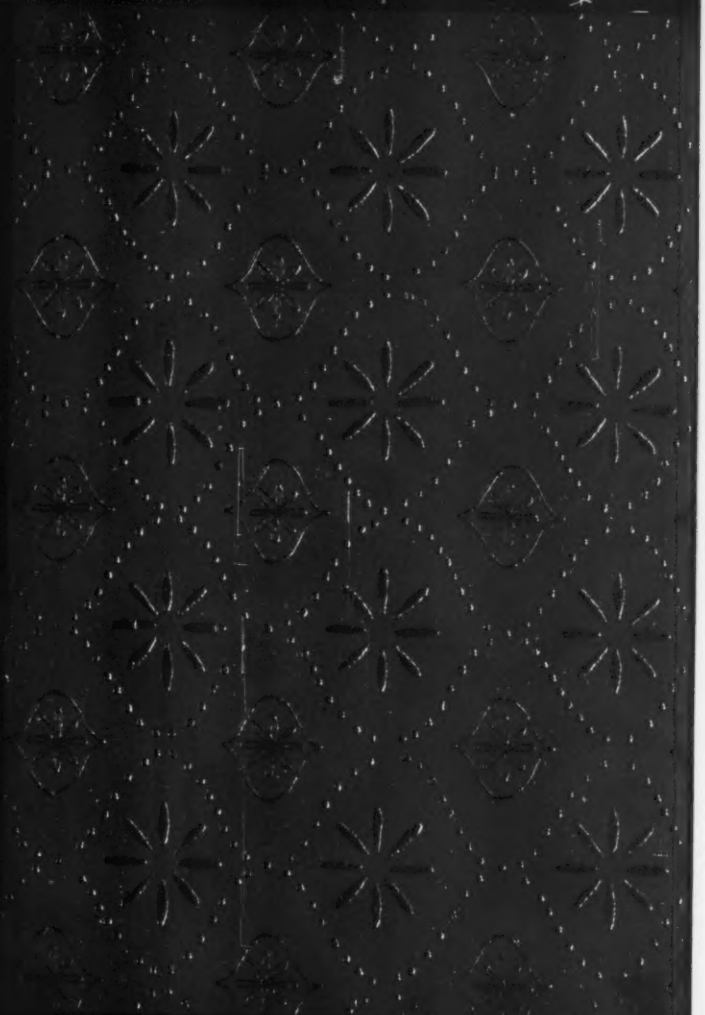
with HIGH RAISED and sparkle designs on CONTINUOUS ROLLS

A completely new, low priced prestige paper for the packaging field. Rayz-Brite is available in over 150 combinations of color, design and decorative material. Your product name and other information can also be raise-printed on standard patterns if desired and exclusive designs will be produced on volume orders.

Ask your distributor to show you his complete swatch books of the deluxe Royalty and economical Consort grades. And have him give you an idea of how inexpensive Rayz-Brite really is.

Look at it; touch it; picture it as part of your package!

Want more information or FREE 20" x 26" SAMPLE SHEETS? Write today for the name of the distributor nearest you or stop by to...



Embossograph PROCESS COMPANY, INC.

SERVING THE GRAPHIC ARTS INDUSTRY FOR OVER FORTY YEARS

NOW YOU CAN USE ONE ADHESIVE FOR HIGH-SPEED MACHINES

SOLU-REZ

■ Simplify your entire gluing operation with a new multi-purpose glue: SOLU-REZ . . .. Morningstar-Paisley's fast-setting resin adhesive. ■SOLU-REZ is designed for all types of carton forming and sealing machines. This one adhesive will handle slow speed and high speed sealing operations, case sealing through short pressure units, and other packaging operations. SOLU-REZ gives excellent mileage because of high resin content. Low viscosity permits adjustment to thin film without excessive penetration. ■ Bonus advantages: runs for long periods of time without bodying up. This eliminates daily clean up. Leave SOLU-REZ in the glue pot—any top crust redissolves at start up. ■Send for your demonstration shipment. SOLU-REZ can be the answer to your adhesive problem. Why not find out.

MORNINGSTAR-PAISLEY, INC.

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MORNING STAR ® Paisley

Adhesives / Starches / Gums / Specialty Chemicals

Offices in 28 principal cities from coast-to-coast. In Canada: Morningstar-Paisley of Canada, Ltd., Toronto

about

FULLY AUTOMATIC

HESSER

PACKAGING

MACHINES

One example:

The world's first new fully automatic machine forming, filling and closing PLIOFILM-lined bags in satisfactory continuous operation in a Canadian coffee plant.

A few of the important features:

- Insured protection by fin-sealed PLIOFILM-liner,
- reduced bag costs,
- attractive package,
- elimination of bag inventory,
- accurate weights with **HESSER** scales,
- reduced labor cost,
- less space required,
- speed,
- automatic height adjustment.

matic **HESSER** packaging ma-
large well known US and
the last few years.

Ed. A. Wagner & Ass., Dallas/Texas
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Agencia Comercial Anahuac S. A., Hugo Schoener
Mexico D. F.

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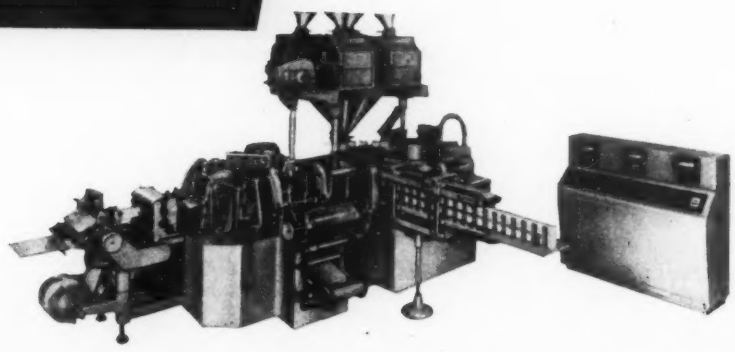
MASCHINENFABRIK-AKTIENGESELLSCHAFT

STUTTGART-BAD CANNSTATT · FOUNDED 1861



210/2

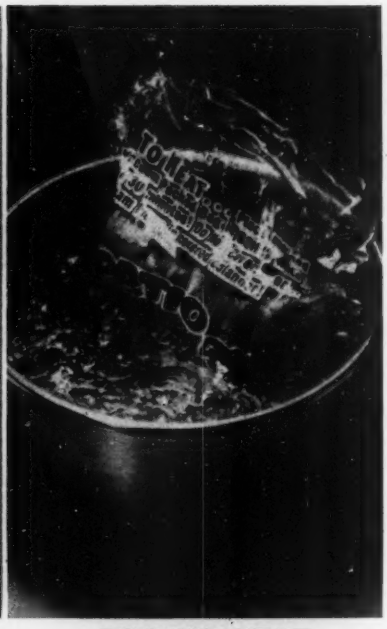
STRONG, CLEAR DUPONT "MYLAR"* SOLVES THE TOUGH PACKAGING PROBLEMS

DEEP-FREEZE COLD

Stow it away in the coldest freezer, ship it under the roughest conditions—this sparkling vacuum pack of "Mylar"* polyester film and polyethylene stays strong. Leakers pose no problem for San Juan Fishing & Packing Co., Seattle.

SHARP EDGES

Jagged saw teeth can't puncture this new heavy-hardware package of "Mylar" and polyethylene bonded to cardboard. It's the only package that the Chicago Saws Co. could find to do this tough job . . . and still show the product.



BOILING HEAT

Heat-in bags of "Mylar" and polyethylene are getting wider distribution for Patio Foods, Inc., San Antonio. They've found bags of "Mylar" protect food flavor best, withstand broad temperature ranges from boiling to freezing.

**Du Pont's registered trademark for its polyester film.*

Your Du Pont Authorized Converter has combinations of "Mylar" in roll stock or pouches. He can also provide more information. For his name write: E. I. du Pont de Nemours & Co. (Inc.), Film Dept. MP-1, Wilmington 98, Del.

DU PONT
Better Things for Better Living ... through Chemistry

DU PONT MYLAR® POLYESTER FILM

MASTERPIECES IN METAL CONTAINERS

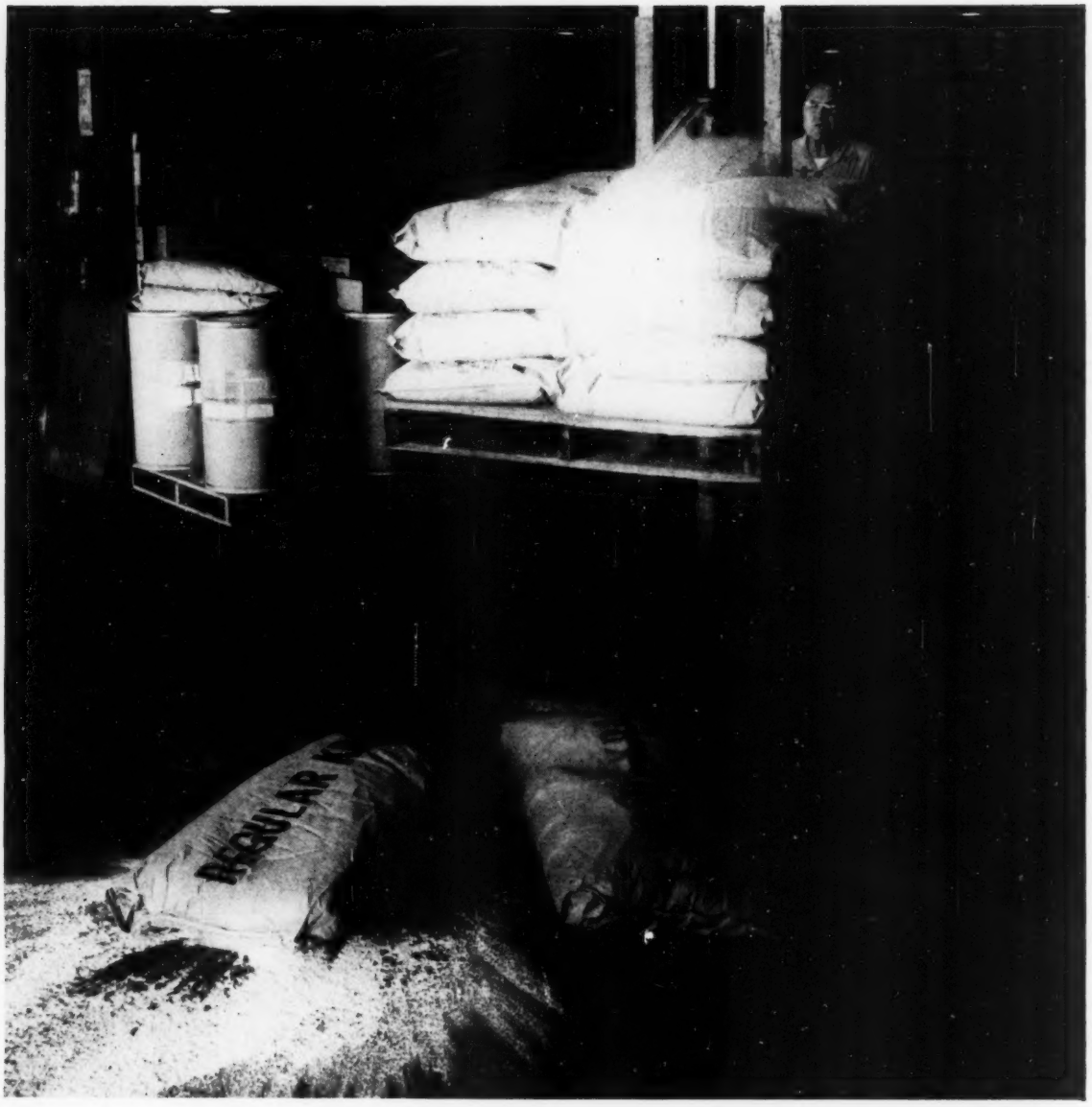
German pewter cosmetic container of Empire period (circa 1830)—courtesy of The Art Institute of Chicago

new from Clark

Lithographed metal, combined with molded plastic, produced this attractive container with a revolving-sifter cap. Offering advantages for talcum powder and related products, the can, with its snug-fitting, smooth-turning closure, is a new development by Clark.

Ever since the Bronze Age, man has recognized the superiority of *metal* as a packaging material unmatched for its strength, beauty, and versatility. Through countless centuries, metal craftsmen have become ever more skillful and imaginative, striving always to perfect container design. Today J. L. Clark produces exceptionally fine lithographed metal containers for many of the country's leading brand names—among them the "best sellers" in the cosmetics and toiletries field, shown here. Whether your products are cosmetics or fall into innumerable other fields, we suggest that you come to Clark . . . where your packaging needs will be served effectively and economically. . . . . **J. L. CLARK**

ROCKFORD, ILLINOIS



One bag shattered . . . the other has two-way stretch

The *unbroken* bag is made of H&W's new high-strength Expanda-Kraft.

As the lift truck braked to a sudden stop, both bags flew through the air and fell hard against the concrete floor. The regular kraft bag split open — note the spilled flour. Yet, look closely at Expanda-Kraft. *Not a sign of breakage*! Naturally, both bags were identical in basis weight and number of plies.

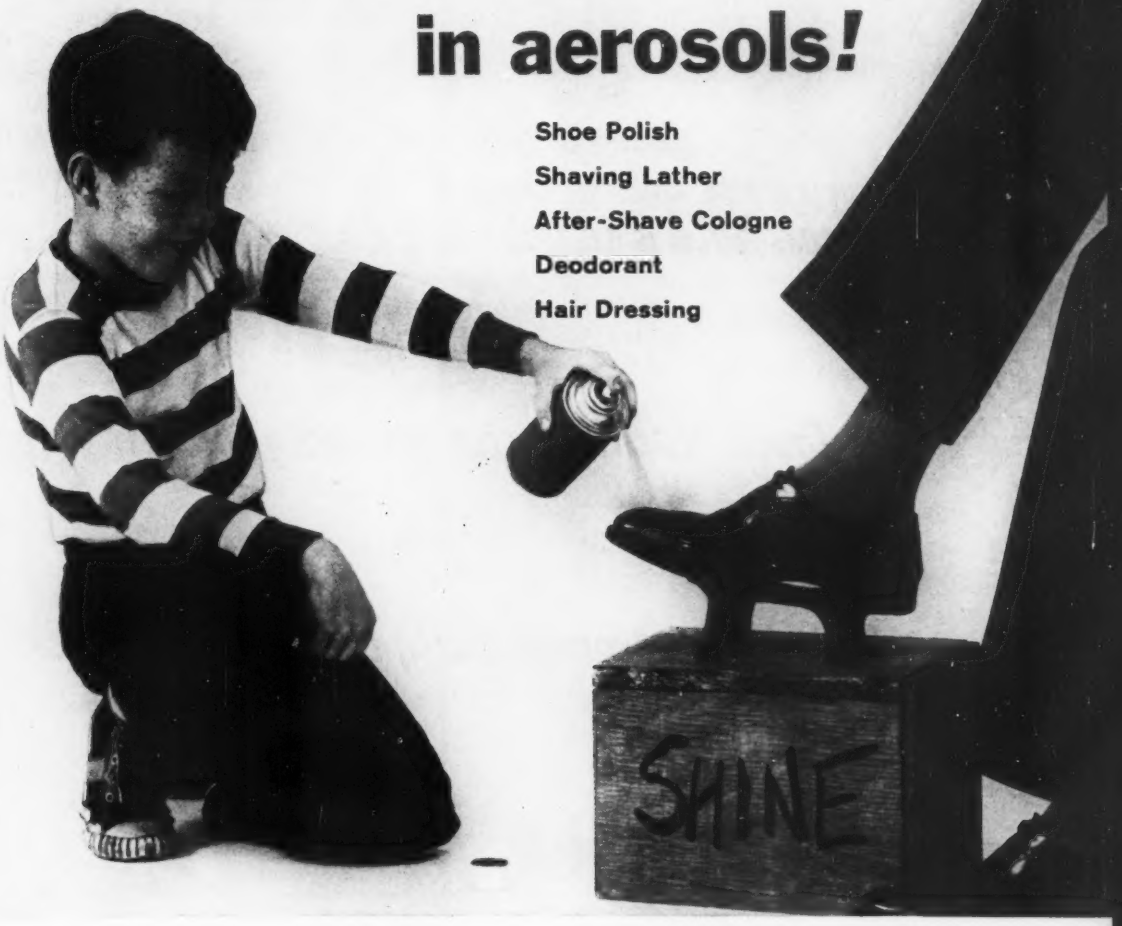
Expanda-Kraft is stronger, because it's made by a special roll-crepe process. It's resilient, has two-way stretch that soaks up shock. Available in white, semi-bleached and natural.

Expanda-Kraft comes in 40, 50, 60, 70, 80 and 100-pound basis weights. *For samples and information*, write Hollingsworth & Whitney, Division of Scott Paper Company, Chester, Pennsylvania.

EXPANDA-KRAFT®

HOLLINGSWORTH & WHITNEY DIVISION OF
SCOTT PAPER COMPANY

Polishing off a neat profit . . . in aerosols!



Shoe Polish

Shaving Lather

After-Shave Cologne

Deodorant

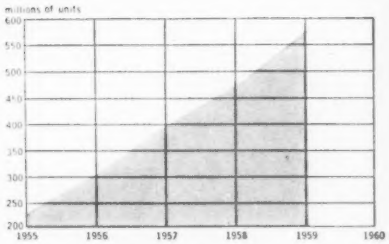
Hair Dressing

How the magic touch of aerosol packaging skyrockets sales!

Alert businessmen are turning to aerosol packaging for more sales and higher profit margins. For example, among grooming aids for men, aerosol shoe polish is a real "comer." Right now, it's receiving the kind of aggressive promotion that has made hair sprays and other aerosol products so successful.

If *your* product has "aerosol potential," now's the time to take advantage of General Chemical's many special services to help you enter the aerosol market. As a leading supplier of aerosol propellants, General can provide valuable technical data, latest market information and promising new aerosol formulations developed in its laboratories. In addition, General can help you select a contract filler who will take over the complete packaging job from preliminary tests to full-scale commercial production.

Don't wait to take advantage of these many helpful General Chemical services. Phone or write today . . . you may open the door to a whole new world of sales for your product.



Sales of aerosol products have grown 135%* in the last 5 years!

*Estimated by Market Surveys Department, General Chemical Division, Allied Chemical Corporation.

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N.Y.

genetron®
aerosol propellants

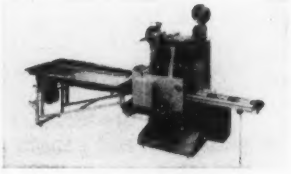
Putting the "push" in America's finest aerosols

if you can hold it in your hand (and it is reasonably rectangular) • • •

Battle Creek Machines can probably wrap it better,

faster, more economically than any other.

This compact Model 152 Flexopaker pouch packages in heat sealable or cohesive papers Baked Goods; Automotive and Electrical Parts; Textile, Medicinal and Paper Products; Toiletries and Sundry items. It is adaptable for short runs of articles requiring quick changeover or longer runs requiring high production. Belt type intake floats fragile, sticky or loose products through sealing wheels at speeds of 15 to 80 per minute. Perforations between pouches, if desired, allow easy separation. Convenient handwheel varies pouch widths and lengths are altered mechanically within a range limit of 27″ x 15″ x 1″ and 2″ x 2″ x 1/16″.

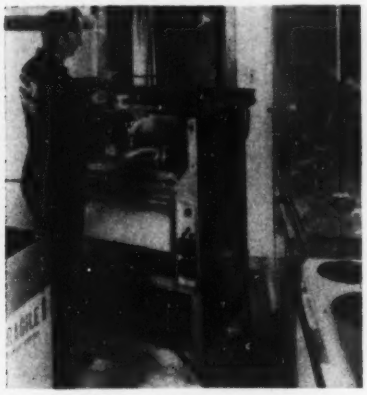


Continuous Flow® PACKAGING

BATTLE CREEK *packaging machines, inc.*.. BATTLE CREEK, MICH

Packaging Notes

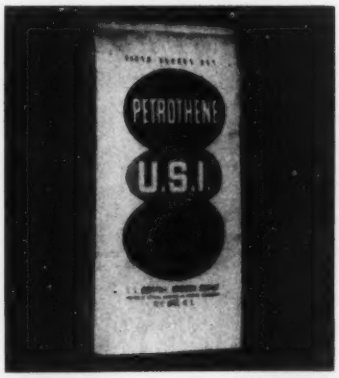
On-the-spot polyethylene skin packaging is revolutionizing the moving industry. With a new portable machine which can be rolled right into a home and run on any 110-120 volt circuit,



barrel packing can now be accomplished in 25% less time at a 33% savings in material costs. Device applies a tight, 6-mil polyethylene film cover over small or fragile articles, anchoring them firmly to a polyethylene-covered corrugated board. Full cycle is said to take less than 30 seconds. Standard moving barrels are used.

Because of its easy portability, this machine is also being utilized by manufacturers for in-plant packaging of electrical components, spare parts, etc.

New Bag For U.S.I. PETROTHENE® Resins



A newly-designed 50-lb. bag now packages U.S.I. premium PETROTHENE resins. It has an outer ply of semi-bleached Kraft, imprinted with a new 3-oval U.S.I. insignia. Look for this bright white, red and black bag, instead of the familiar red on brown one, next time you order.

Blow Molding Upturn Ushers In New Products

May Yet Rank With Injection Molding As Polyethylene Market

Blow molding, a 50-million-pound polyethylene market in 1960, is expected to show dynamic growth in 1961. Predicts Vincent D. McCarthy, Director of Plastic Sales for the U.S. Industrial Chemicals Co.: "This year blow molding will climb faster than ever . . . and may eventually compare with injection molding as a market for polyethylene." Injection molding now consumes 250 million pounds of conventional polyethylene yearly.

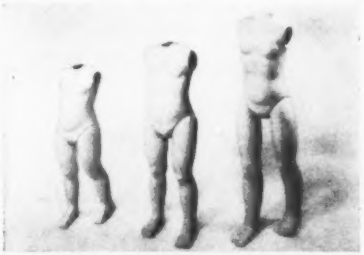
"The tremendous growth of blow molding high density polyethylene has also created a substantial demand for blow molding conventional polyethylene," he explains. "The use of conventional resins, either by themselves or in blends with high density resins, will continue to increase."

Technical advances are also contributing to blow molding's upward trend—spurring new products, creating new applications.

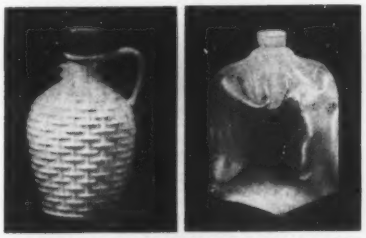
A Long Island, N. Y., plastics company, for example, is now making a walking doll 40 inches tall. New techniques, the recent acquisition of extremely large blow-molding equipment, and the consistent uniformity of the U.S.I. resin used are credited with making production possible.

And, from Europe comes report of the popularity of a polyethylene wine flask. Blow-molded in Portugal from a PETROTHENE resin, it's said to be ideal for short-time storage. A simple treatment overcomes any influence of polyethylene on flavor: Filling the container with pure water, leaving it for 24 hours, then emptying apparently does it.

In this country, news is being made by a 5-gallon *collapsible* jug—extrusion blow-molded from PETROTHENE by a Cleveland concern. This corrosion-resistant container can transport and store virtually any liquid, costs only about 90¢ with cardboard carton.



DOLL BODIES blow-molded of polyethylene to proportions of 2-, 3-, and 4-year olds.



WINE FLASK and COLLAPSIBLE 5-GALLON JUG are typical of new products being blow-molded of U.S.I.'s PETROTHENE polyethylene resins.

Hot-Transfer Process to Decorate 300,000,000 Bottles

The tide of blow-molded bottles decorated by the relatively new hot-transfer method is rising steadily. According to the company developing the process, it will be applied to more than 300 million plastic bottles during 1961.

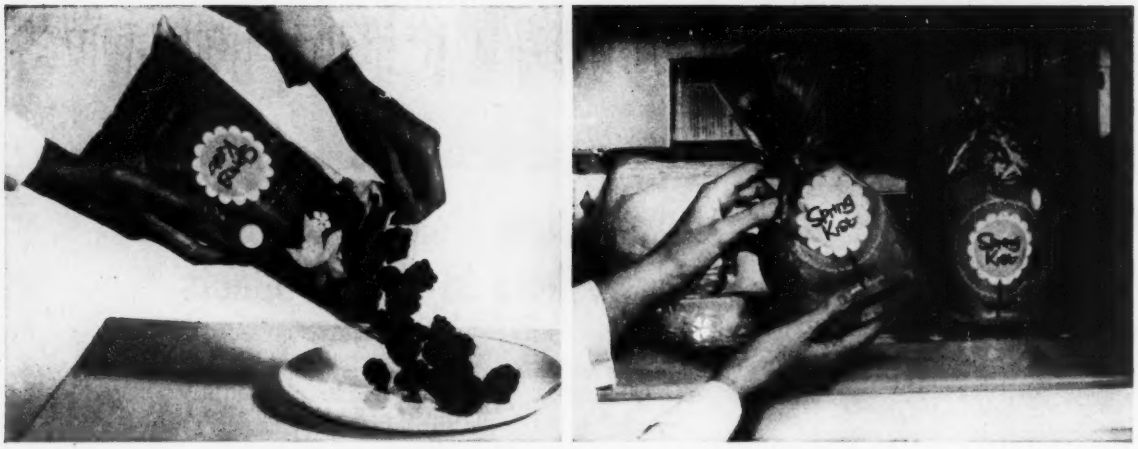
Success of the technique is attributed to both its efficiency, and the recent breakthrough of low-cost, semi-rigid polyethylene bottles.

Reportedly, equipment is now available for applying multicolor designs to bottles of any shape "at speeds up to 100 units a minute at a fraction of the cost by other methods."

Automatic machine applies wrap-around labels to cone-shaped bottles. Design is reverse-printed on heat-release coating. Post-heating ovens impart gloss to the transferred printing.

Pipe, Fittings of Polyethylene OK'd by New York City

For the first time, the N.Y.C. Board of Standards and Appeals has approved polyethylene pipe and fittings for acid and chemical waste systems. The approved drainlines, made by a Rochester, N. Y., company, are now also acceptable to Buffalo, Cincinnati, Detroit, Los Angeles, the State Plumbing Code of Michigan and the Plumbers' Examining Board of Richmond, Va.



Spring Kist's 4-color package shows consumer appeal of individually frozen food in large, polyethylene pouches—in the supermarket . . . when it's poured . . . when it's stored.

SELL MORE WITH "POUR AND STORE" in economical Polyethylene pouches

New 1 lb. to 3 lb. polyethylene packages of individually frozen *pourable* fruit and vegetables are winning acceptance.

Thrifty housewives like them because they can buy for less . . . pour out what they need for a serving . . . store the remainder in the freezer. There's no frozen mass to thaw, either. Retailers, moreover, report this development represents a new market . . . has little effect on sales of conventional small-sized containers of solid-frozen food. And the economy appeals to institutional buyers and to locker plant operators serving cost-conscious, bulk-buying consumers.

To get your share of this rapidly growing market, you need polyethylene bags that won't become brittle at freezer temperatures and break when handled hurriedly . . . that have sparkling gloss and clarity yet can be fully color-printed to minimize bleaching of green vegetables under neon lights of supermarket freezers . . . that don't form condensation clouds when properly packaged . . . that keep food fresh and appealing. *You need bags made from U.S.I.'s* PETROTHENE® *polyethylene resins.*

Here, for example, is the experience of Spring Kist Sales, Inc., Salt Lake City, Utah, packager of free-flowing, frozen fruits and vegetables: Spring Kist eliminated a serious breakage problem by adopting 3-mil polyethylene bags made by Texas Plastics, Inc., from PETROTHENE resin. Since making the switch over a year ago, the company has had excellent results – bag breakage is nil and sales curves have risen sharply.

Ask your polyethylene bag supplier to investigate the advantages of film made of U.S.I. PETROTHENE resins in producing pouches that add appeal to frozen fruits and vegetables . . . yet withstand handling at sub-zero temperatures . . . and cost less than other packages. U.S.I.'s experienced technical service engineers will be glad to work with him in producing bags that deliver all of polyethylene's potential. For more information, write to:

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
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Branches in principal cities

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flexible packaging
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will surround it
with SELL!

Oneida PAPER PRODUCTS INC
10 Clifton Blvd Clifton N J

Another quality product that now uses

Riegel FOLDCOTE

Full-bleached sulphate board on machine-coated, one side

For noticeably brighter, cleaner packages ... and extra eye-appeal ... try Riegel's outstanding new carton stock ... Foldcote.™ Superwhite for color brilliance, super-smooth for high-fidelity reproduction ... super-strong for a rugged, rigid package. Ask for samples and full information. Ask too, about other solid bleached boards tailormade to your needs. Write to Riegel Paper Corporation, 260 Madison Ave., New York 16, N.Y. Export inquiries invited.

The Archer Aluminum Division of the R. J. Reynolds Tobacco Company uses Riegel's cigarette carton stock for Reynolds' Winston carton ... printed gravure in three colors.

WORLD REPORT

*Abstracts from foreign packaging magazines**

GERMANY

Pilferproof closure with breakable ring

For drugs, perfumes and toiletries, or similar products, a reportedly pilferproof plastic stopper of new construction has been developed by a German firm. According to *Packaging* (England), the stopper consists of two components—a screw cap which seals the bottle in the conventional manner, beneath which is a separate ring which breaks into two halves immediately the cap is unscrewed the first time. The construction is designed for bottles having specially designed neck finish, which is provided with four projections. These fit into the lower part of the ring, whose inner circumference is provided with four teeth designed similarly to a ratchet wheel. The upper part of the ring, which fits into the rim of the cap, is provided on the interior with 16 teeth shaped as in a bandsaw. Four small teeth on the rim of the cap act as a locking device as soon as the cap is screwed down and the teeth engage with the notches on the ring. When the cap is unscrewed, the ring in its locked position is forced to follow the cap in its turning movement. This is prevented by the projections on the bottle neck, which tend to hold the ring in its original position as happens with a ratchet wheel when the ratchets are engaged. Because the ring is made of fragile material, it is easy to forecast what will happen. The four teeth inside the ring are forced over the projections on the neck of the bottle, but because of the brittleness of the material, expansion is out of the question and the ring breaks. The article does not state what plastics are used.

Sausage in plastic tubes

Mettwurst—the soft sausage spread which has hitherto always been sold in normal sausage casings—is now making its appearance in Berlin in squeezable tubes of polyvinyl chloride. According to a report in *Packaging Review* (England), tests showed that sausage filled in PVC tubes and stored at room temperature had the same keeping qualities as casing sausage stored in a refrigerator over a test period of two weeks. Small openings of the tubes, in contrast to cutting area of casing sausage, are said to offer better protection in the home. Tubes are made of transparent film, printed in blue, and have a red screw cap.

FRANCE

Polyamide gaskets for ether packaging

The highly volatile characteristic of ether has always presented problems of packaging in small quantities. A solution reported in *Packaging* (England) concerns a system of packaging ether in seamless "monobloc" aluminum containers designed for aerosols, combined with a polyamide gasket. The system, developed by a French contract packager, is said to eliminate all risk of leakage through seams or joints of the container, the only seal to be achieved at the neck. The answer to the seal, according to this article, is found in the use of a polyamide gasket—a material reportedly impermeable to ether and suitable as a long-time barrier, because of the way it has resisted stringent tests for "plastic flow" or "creep." An over cap is provided to protect the seal in transit and for temporary reclosure after the aluminum sealing membrane has been punctured.

News from French Packaging Institute

Among developments mentioned in *European Packaging Digest*, published by the French Packaging Institute, are:

- Two new barrier materials from Germany—wet-strength kraft paper glued on polyethylene film with a bituminous compound and a similar combination with a twine mesh included in the sandwich. The materials may also be made with wet-strength crepe paper on both sides. These materials are for use in the industrial packing field for wooden box and crate lining. The type with twine mesh included is recommended for baling. The materials are reportedly inexpensive, strong, waterproof and, to a certain extent, they are moistureproof.
- A simple French machine that sets up cartons from blanks by hooking. The machine is not adjustable to different sizes, but apparently is extremely low cost, which allows buying several models. It is pedal operated.
- A French polyethylene bag-making machine that puts out bags already sorted and counted at very high speed. The bags may be plain or printed, simple tubes or gusseted tubes. The machine runs from rolls of material. Disposition of the rollers is such that they may be changed in a few moments. Several rollers may be used simultaneously. Output is reported to be 4,000 units per minute for each roller. The number of rollers depends on their widths, which cannot exceed a total of 400 mm.
- A French machine that seals closures on filled pouches made of polyamide film, cellophane or cellophane-laminated polyethylene under vacuum. The electrode is placed in such a way that if the pouch contains a liquid, it cannot escape. The loading table is mobile and receives the pouches outside of the machine, thus allowing them to be placed rapidly. Functional width of the seam, 650 mm.; maximum length of the pouches, 250 mm.; maximum thickness, 45 mm.; time of the complete cycle of the machine—loading, vacuum and sealing—15 seconds.
- A corrugated shipper developed by an Italian company to solve the problem of cost and other problems involved in using timber or timber-framed solid-board boxes for such domestic equipment as refrigerators, washing machines and other large appliances. The shipper is reported to provide crush and impact protection by the insertion, inside the side wall, top and bottom flaps, of panel-like pads. The pads have a honeycomb core and are faced with low-grade corrugated boards. Savings are claimed to be up to 35% of container purchase and 25% of packing-labor costs. The container was a 1960 Eurostar winner.

AUSTRIA

Promotional action for packaging activity

A profusely illustrated booklet to give a survey of the packaging level achieved in Austria has been published by the Austrian Ministry of Commerce & Reconstruction and the Austrian Packaging Institute. The booklet reviews, with full descriptions, some 30 winners in the Austrian packaging competition for 1960—four of which were winners of the European Packaging Federation's Eurostars. Two of the packages described should be of interest in this country. A hexagonal corrugated container is designed expressly for modular arrangement of the four-sided, tetrahedron-shaped paper containers, such as are used for milk

*For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

and fruit juices in the U.S. An unusual folding-box construction merchandises knives, forks and spoons, in half dozens of each, in separate die-cut cartons with slots to hold each item. The individual cartons are grouped in a wrap-around sleeve, with carry handle, to encourage sales of sets. Silhouette illustrations reproduce the flatware pattern.

ENGLAND

Long-play record on confectionery carton

Similar to the breakfast-cereal cartons, made with acetate phonograph records laminated to their face, are cartons for G. F. Lovell & Co.'s Top Ten candy and chocolate cartons which have been introduced in England with recordings of "Wouldn't It Be Luverly" and "Little Bit of Luck" from "My Fair Lady." According to *Packaging News* (England), this is the second firm in Britain to merchandise this bonus package. Another firm previously adopted the record-playing cartons for gift packages of four bars of toilet soap.

Why not more food in tubes?

The long-standing question of why foods packaged in tubes have such wide acceptance on the Continent in contrast to seeming lack of interest in tubes for foods in Britain (and America) is raised in an article in *Sales Appeal* (England). On the Continent, the article points out, tubes of both metal and plastic are popular for tomato puree, mustard, processed cheese, mayonnaise, sandwich fillings, jam, butter, honey, liver paté and other products. Even in Britain mustard, condensed milk, cheese and syrup have met with limited and, in some cases, unequivocal success. Why then, the article asks, not more foods in tubes?

Automatic double-end labeler

A double-end labeling machine reported to be extremely versatile for the application of paper, foil or plastics labels on either one or both sides of a wide range of packages, is described in *Packaging* (England). The new machine, manufactured by a firm which heretofore has supplied equipment primarily for the tobacco trade, is suggested for a wide range of packages, such as biscuit and tea packets, small game and toy packages, packs for pharmaceuticals, electric and radio components. The standard model will accommodate packages from 5⅝ in. up to 12 in. between labeled faces and the label sizes may vary from 2 in. square up to 3¾ by 4½ in. Speeds can range from one pack per minute up to a maximum of 100 packs per minute (200 labels). The input rate may be either regular or intermittent. Positive label feed is insured by the latest type of suction mechanism which picks up a label from the bottom of the stack, feeds it between rollers, through a coding device and on to a unit which picks up adhesive from a continuously running gum roller. The gummed label is carried to a gripper drum which rolls it on to the package as it ascends the flight conveyor. The labeling mechanism is actuated by the flow of packages.

Foods in polyamide polar ice cap

Bags of polyamide film will be exposed to extreme weather conditions this year when they are used to protect food for Explorer Eric Shipton's latest expedition. Each bag will contain four days' rations for the four-man party, says *Packaging* (England) and will be slung on to frames and conveyed manually or by sledge. The members of the expedition, who will have no bearers or motorized transport, intend to investigate the effects on the ice cap of the recent earthquakes in Chile. The packaging material was chosen because it remains flexible at temperatures as low as 45 deg. C. in deep freeze and will have to withstand Patagonia's heavy rain and strong winds (often reaching speeds up to 130 m.p.h.) without extra protection. Canned foods are normally taken on such expeditions, but would add something like 20% to the weight allowance for food. The expedition's cheese, oats, milk powder and coffee, therefore, will be vacuum sealed in small lightweight pouches of 0.0016-in.-thick polyamide film. The package portions in turn will be sealed into bags of the same material together with the rest of the diet, each of the bags containing two days' rations for the entire party.

INDIA

Role of packaging in a changing economy

A 25-page section of a recent issue of *Industrial India*, containing nine articles on packaging, gives a significant insight into the growing importance of packaging activity in the steadily rising industrial economy of India. The articles cover protective and merchandising aspects of packaging, the choice of packaging materials, the decorating of packages, written by leaders in the packaging field in India, with a two-page spread of photos illustrating the facilities for making these materials.

THAILAND

New type of tapioca flour

From Thailand comes the report of a new type of tapioca flour for adhesives used in the production of paper and particularly corrugated cartons. According to description in *Notiziario dell'Instituto Italiano Imballaggio* (Italy), the material gives performance measuring up to standards, possesses high initial viscosity and provides good resistance in the packaging of caustic materials.

JAPAN

Carry-pack handles to encourage take-home

The economics of using a pre-made "carry-home" handle for attachment to parcels compared with the use of string or twine to secure multi-unit purchases are discussed in *New Packaging* (Japan) as a way of inducing store customers to take packages home rather than to ask for delivery.

Beer canning makes its debut

The Kotobukiya Brewery Co. has developed a canned beer, "Torys Whistan," the first of its kind in Japan, according to *New Packaging* (Japan). Retailing at 60 yen for 180 cc., the can is five-color decorated using gold-colored lacquer to enhance the effect. The cans, which are described as tinplate, are double lacquered internally and are said to be substantial enough to withstand the pressure of carbonic acid gas. The cans are produced by a Japanese firm.

Polyethylene bag with thread-like zip fastener

A recent issue of *New Packaging* (Japan) was distributed in a side-weld polyethylene bag fitted with a thread-like zip-open fastener produced as a continuous filament and obviously applied to the film web continuously, presumably as part of the bag-making operation. Despite its thickness —that of a hairpin—the closure is effective. The user simply runs a finger along the fastener to close the bag or to pull it open by the free edges to release the fastener.

AUSTRALIA

Whiskey for export

An Australian whiskey, "Corio Black Gold," is to be exported for the first time. The entrance into world markets of this product is hailed proudly by *Australian Packaging* as a truly Australian product, the package design, the bottle, the carton and shipping container all made by Australians using Australian materials and know-how.

*For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

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You expect the world's broadest line of aluminum containers from Ekco-Alcoa. You expect immediate delivery through its network of distributors.
But what you may not expect is the service of our highly creative design staff. This is the little extra touch that makes Ekco-Alcoa the industry's most helpful source.
There's no such thing as a "stock" design at Ekco-Alcoa. Our designers treat each problem as an individual challenge. They work equally well in any medium . . . foil, paper board, plastic, heat-shrink film, what have you. This unique packaging service is available to all customers.
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Latest packaging developments . . . answers to problems . . . in your 1961 Modern Packaging Encyclopedia

What's new — and "how-to" — in package planning, methods, forms and materials!

PHOTO SHOWS packaging engineers developing laboratory-perfected designs for use of wraparounds instead of conventional chipboard shippers.

Here it is—the latest information on package planning, practice and production . . . the answers to hundreds of packaging problems, too! Your 1961 Modern Packaging Encyclopedia Issue, published in Nov. '60, is newly revised and up-dated to bring you authoritative, up-to-the-minute information on *all* phases of modern packaging.

The first section, for example, covers package planning, methods and materials, and discusses topics like trends and developments, the anatomy of successful packaging, development of the package, check list for package planning and guide to contract packaging, to list but a few. Included also is a brand-new survey of current packaging practices in 85 major companies; a complete round-up of new packaging developments; production challenges ahead—*plus* valuable package planning tips that will help you save time, trouble and dollars!

PACKAGE MATERIALS

Next, there's a section devoted to package forms and materials. Included are articles on glass packages, closures and caps; aerosols, valves, propellants; wraps and overwraps—as well as 200 pages filled with up-to-the-minute charts, tables and articles on the forms of packaging, plus cost-cutting tips and new ideas in design.

Section three deals with machinery—including the machinery of packaging, machinery selection checklist, package-making equipment. What's more, there's a brand-new 22-page guide to basic types of filling machines.

IDEA EXCHANGE

Then, the package design and merchandising idea exchange serves as a complete source of ideas and inspirations for new designs, new constructions, new materials and new concepts in marketing strategy. Examples of outstanding packaging developments in many lines of businesses are illustrated and described to give you a chance to measure *your* package against the latest and best examples of effective packaging around.

FOAMED POLYSTYRENE sheet — vacuum formed to provide cavities, hinges, pedestals for electronic parts, fish lures, golf balls —invites "imagineering."

DIRECTORY SECTION

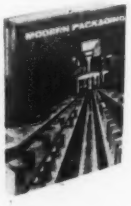
What's more, the directory section supplies you with complete, accurate and up-to-date lists of manufacturers of packaging materials, supplies, machinery and equipment. *And* there's a list of packaging service organizations that is the *only* such "Where to Find It" guide available anywhere!

EASIER OPENING. Looped finger tab tears scored strip. Cap ends are aluminum. Body is low-cost foil and paperboard.

Not only that! Over 50 special charts and tables contain a wealth of engineering and marketing data—invaluable for research, planning, in-plant training and many other packaging fields.

STANDARD WORKBOOK

Your Modern Packaging Encyclopedia Issue for 1961 offers over 800 pages crammed with information and valuable data to help you put more profit into *your* packaging program. Make the Encyclopedia your business advisor, cost consultant, production tool and purchasing guide. You'll be glad you did! Modern Packaging, 770 Lexington Avenue, New York 21, New York.



A Breskin Publication— The Complete Authority of Packaging

NEW TOP GRADE FOR FINEST QUALITY LINE OF RIDGELO BOXBOARD

No. 90 Ultragloss

Solid White

BRILLIANTLY finished No. 90 Ultragloss is now available in "Solid White," for folding cartons of unusual attractiveness *any* way you look at them . . . outside, inside, on the edges! Made with a remarkable new kind of white base stock developed by Lowe, it is superior to other high gloss boxboards in performance as well as in appearance.

New No. 90 Solid White has just-right rigidity and snap, prints with high fidelity, folds cleanly and uniformly. It is priced a little above No. 90 White Bak and No. 90 Gray Bak, but it is the peak value of *all* folding boxboards when maximum carton beauty and distinction are your objectives.

Write or phone for samples and detailed information

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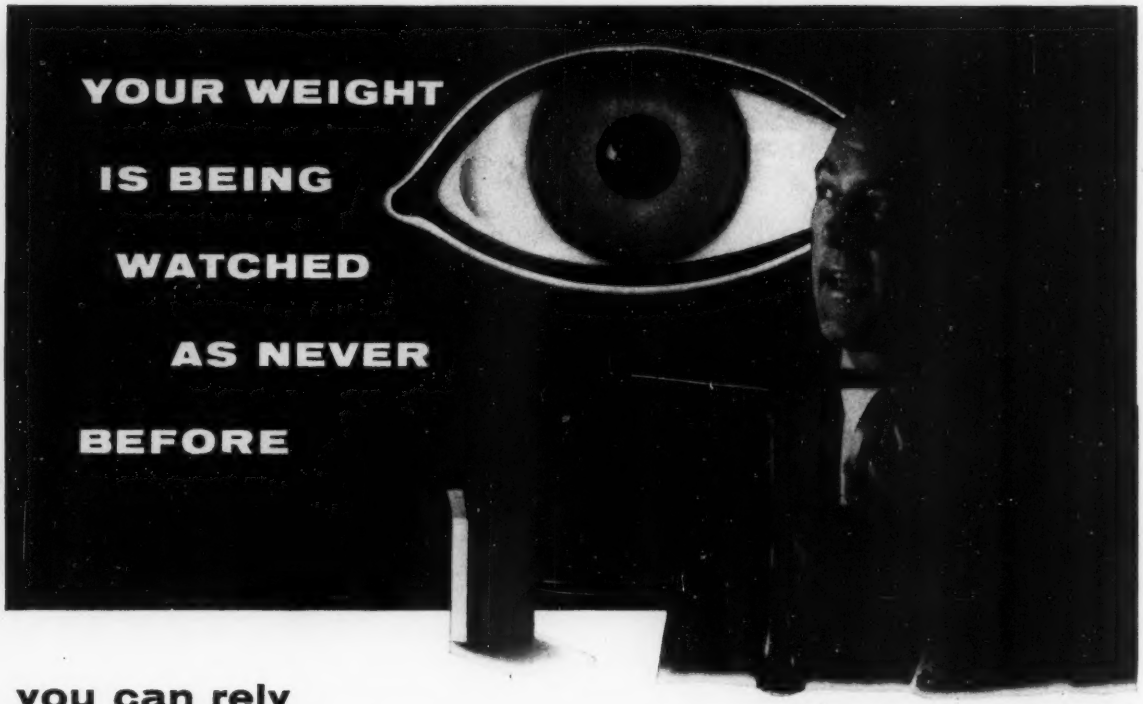
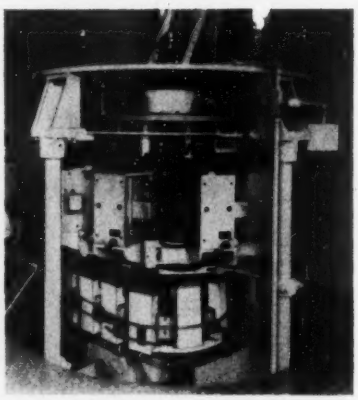
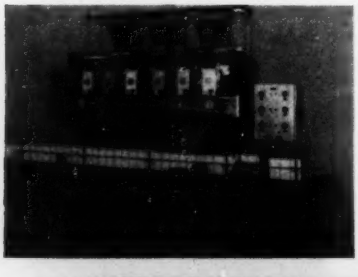


you can rely on the accuracy of Pneumatron, as these companies do

Weight is now a more "critical factor" than ever before with new, more exacting government requirements to be met. This is a growing headache for management executives with something less than modern equipment operating in their plants. But the man with Pneumatron working for him can smile all the while.

Pneumatron is the ultimate in speed and accuracy for net weighing, employing a simple air pressure principle. The weighing mechanism consists primarily of a cantilever assembly and air jet control. Deflection of goods receptacle is detected by air with direct shutter latch—no knife edges to wear or corrode. No delicate trip mechanisms needing frequent adjustment are involved. System is completely responsive to changes in product density. It eliminates continuous check weighing and resetting for variations of density.





Pneumatron is available in 2, 4 and 6-head units with single or dual stream weighing. It is also incorporated in Velocitron—Pneumatic's all-in-one machine for feeding, bottom sealing, filling and top closing. Send for bulletins 122 and 133 for complete details.

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- PET MILK CO.
- BEECHNUT LIFE SAVERS

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; Dallas; Rochester; Rockwell Pneumatic Scale Ltd., London, England.* Agents: *Fred Todt Company at Los Angeles, San Francisco, and Seattle.*

PNEUMATIC *Packaging and Bottling Equipment*

Eastman now offers formulators and converters 7 basic types of polyethylene

New Epolene resins broaden formulation range of wax coatings

The wide range of properties available in Eastman's series of low-molecular-weight polyethylene resins provides formulating flexibility never before possible. With the addition of three new resins (Epolene LVE, HDE and HD), formulators and coaters of paraffin waxes can now choose from among seven different types to achieve that combination of properties which best meets the requirements of the paper and packaging industries.

Epolene polyethylene improves the properties of paraffin blends in these ways:

- reduces flaking
- increases toughness
- increases abrasion resistance
- improves adhesion
- improves resistance to thermal shock
- increases mileage
- raises blocking temperature
- improves gloss

Each type of Epolene polyethylene contributes, to a greater or lesser degree, to the improvement of each of these properties. Thus, through selective blending, you can formulate waxes of optimum performance for your equipment and service.

Epolene E *oxidized* • In general, the oxidized Epolene resins improve the adhesion of paraffin blends to a greater degree than do the non-oxidized types. Among the oxidized types, Epolene E is superior in this respect, and in its ability to increase the softening point of paraffin blends.

Epolene LVE *oxidized* • When good adhesion and a low cloud point are important, Epolene LVE should be considered as a component in paraffin blends.

Epolene HDE *oxidized* • This is the first high-density, oxidized low-molecular-weight polyethylene available. Epolene HDE is suggested for use in wax blends that must exhibit good adhesion and mileage.

Epolene N *non-oxidized* • Epolene N contributes maximum hardness and high tensile strength to paraffin blends. It also enables coaters to obtain excellent mileage.

Epolene LV *non-oxidized* • Epolene LV is one of the easiest to handle among the low-molecular-weight polyethylene resins, because of its low melt viscosity. Paraffin blends containing Epolene LV also exhibit low viscosities at application temperatures, and relatively low cloud points.

Epolene HD *non-oxidized* • Epolene HD is the hardest of all the low-molecular-weight polyethylene resins, yet is easy to handle due to its low melt viscosity. It produces paraffin blends that have high softening and blocking temperatures.

Epolene C *non-oxidized* • Epolene C, a unique polyethylene resin, has the highest molecular weight and lowest density of all the resins in the Epolene series. Contributing maximum tensile strength in conventional blends, Epolene C is also being used to advantage in coatings in which it is the principal component.

If you are using low-molecular-weight polyethylenes in your wax formulations, or are considering their use, investigate the complete Epolene series. Your Eastman representative will gladly explain the advantages of each of the resins in the series and will show you how to realize the most profitable use of them in your formulations. Write today for more information.

Physical Properties of 2% EPOLENE-Paraffin Blends
(130° AMP Paraffin)

PROPERTY	EPOLENE TYPE						
	E	LVE	HDE	N	LV	HD	C
Density *	0.938	0.939	0.956	0.928	0.925	0.938	0.907
Viscosity, cps.	4.8	5.5	5	5.2	4.3	5.4	5.2
Ring and Ball Softening Point, °F.	145	138	140	140	140	145	139
Penetration Hardness, 0.1mm.	15	11	11.5	15.6	13.9	13.9	13.3
Adhesion, Psi.	13.5	13.5	11	8	8.5	5.5	10.5
Cloud Point, °F.	174	165	183	185	176	190	170
Consumption, G./100 in.²	3.79	4.49	3.29	3.69	3.86	4.71	4.32
Tensile, Psi.	455	435	280	470	465	355	470

*Density of unblended Epolene

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Massachusetts; Greensboro, North Carolina; Houston; New York; Philadelphia; St. Louis. **West Coast: Wilson Meyer Co.,** San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

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EASTMAN low-molecular-weight polyethylene resins

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EDITORIAL MEMO

What's the fuss?

There is growing controversy, in the area of package-design evaluation, between those who put great faith in laboratory visual testing and those who say that the test of consumer choice in the market is all that counts. In this argument, we can take neither side, because the fact of the matter is there is truth on both sides.

Arrayed on one side, against the visual-perception instruments, are most of the independent package designers. Like a worker in the factory, they see the specter of their livelihood being taken away by a machine. They fear not so much that the machine will be used, but that it will be used to the exclusion of their own special talents.

On the other hand, some very astute suppliers, packagers and consultants (even some designers) have developed and used visual-testing machines to obtain what they consider valuable findings. Very few of these would want to turn package design over to a boy in the art department—but many people in the packaging field do feel that the average package designer has an unwarranted feeling of omnipotence.

Certainly the work of the creative artist is fundamental to package design. We heartily agree that the proof of purchase, under both actual and typical marketing conditions, is the only final and conclusive proof. But in between this beginning-and-end—between the artist's conception and the market test of a package—doesn't it make good sense to employ every possible means of checking and perfecting the design?

The visual-perception machine, which can compare the legibility of proposed designs with competitors' under store-lighting conditions, is one means. (Certainly no one is *against* legibility.) A new "voting machine" used in stores which can quickly tabulate shoppers' opinions on alternative package designs is another. (To see how this machine helped choose a new Vicks VapoRub design, turn to the story starting on p. 90, this issue.) There are, of course, other useful tools.

What one designer calls "library-oriented visual research" is, in his own words, extremely valuable in formulating theoretical concepts. He is only afraid that packagers will let theory interfere with the practicality of design and its impact on marketing.

Certainly the intelligent packager, on any major package change, would like to have the benefit of the coordinated effort of the designer, the design laboratory and the market testers. Those who are fighting each other in these areas—which are really complementary, not competitive—would do well to drop the feud and learn to work together in the best interests of all.

The Editors

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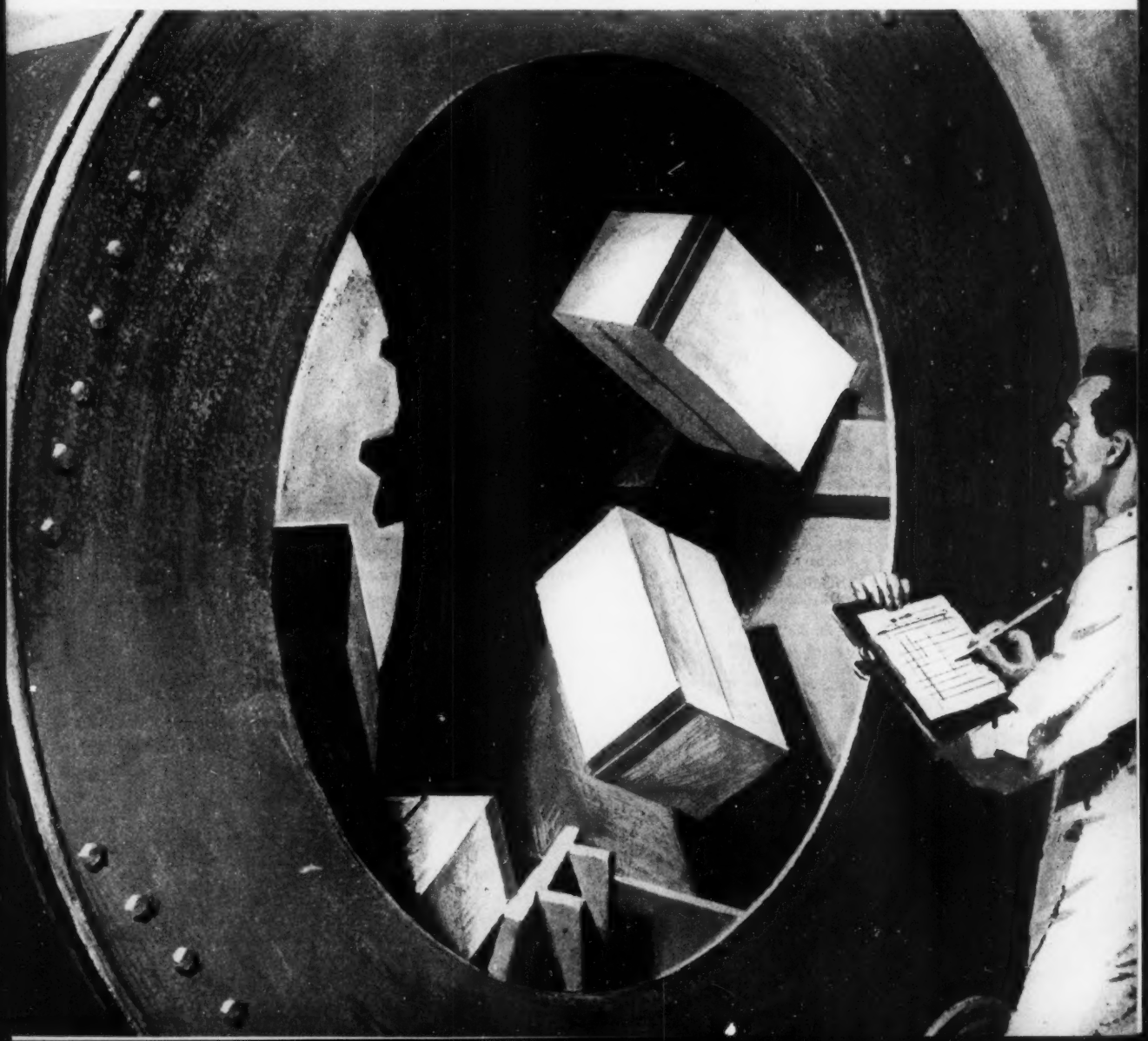


MODERN PACKAGING
MARCH 1961 Vol. 34 No. 7 | THE COMPLETE AUTHORITY OF PACKAGING

Prepared frozen meals *require chef's attention at the food plant rather than in the kitchen. These dinners in foil plates, prepared by Lou G. Siegel, Inc., New York, are covered, frozen and supplied to hospitals and other institutions for freezer storage to meet special needs. Foil plates by Kaiser Aluminum.*

PACKAGING a la carte

Heat-and-eat and other packaged convenience foods, adapting ideas from the consumer field, find a new market of fabulous proportion in the estimated $17-billion restaurant industry

Across the country, thanks to packaging, hundreds of eating places are springing up that can serve hot meals without a kitchen. And the *haute cuisine* of world-famous chefs may become as common in Kansas as short-order ham and eggs—due to the prepared frozen foods that come in plastic bags, aluminum foil and plastic trays, needing only a few minutes of heating before serving.

Packaging is revolutionizing back-scene operations in the nation's eating places as surely as it has turned the former corner grocery store into the supermarket.

And this is a trend worth watching, because it can have an effect on general practice in package design, construction and marketing as great as that of the supermarket itself.

Even de luxe establishments—hotels, clubs and fine-service restaurants—today are using more and more of the labor-saving and convenience of "prefabricated" foods that come in easy-to-use packages. This is a field that differs markedly from convenience foods packaged for the home. Yet, they have much in common. And one can learn from the other.

During the past five years, food processors have become keenly aware of the vast potentials of the "institutional market" (as eating-away-from-home is called in the food trade), estimated at $17 billion annually today and expected to rise to $35 billion by 1975.

Rivalry is keen to promote brands in this field and to provide packaging that cuts costs with portion control and labor-saving short cuts. Yet there seems to be a universal complaint from food-service operators that still

Mechanical cafeteria *at Carl M. Loeb Rhoades & Co., Wall Street brokerage firm, is kitchenless. Packaged hot meals—a development of The Brass Rail—are dispensed table-ready from vending machines, in which pre-cooked frozen menus are heated. Package consists of pressure-formed, high-density polyethylene tray sealed over the top with polyethylene-coated cellophane printed with product information. Notch in side of tray and film flap provide for easy opening. Formed polyethylene tray and film cover by Formed Containers Corp., Orangeburg, N. Y., using Phillips "Marlex" polyethylene.*

too little is being done to meet the actual needs.

An examination of what's going on, with suggestions of how some of the leaders are overcoming the problems, should be helpful to all concerned with the packaging of foods, as well as to packagers in other fields supplying institutional needs.

The problems are complex because of the wide variety of establishments where Americans eat, on the average, one out of four meals away from home. Eating places include hotels, clubs, fine-service restaurants and cafeterias; quick-lunch counters, drive-ins, diners, drug stores, hamburger stands, ball parks, bathing beaches, etc.; transportation meal services on trains, airlines and steamships, and the "captive" installations in industrial plants, schools, hospitals, charitable and penal institutions. All of these have special requirements that must be studied in the light of package performance.

In common with every other business today, the urgent need of the nation's more than half-a-million eating places is for packaging that helps to cut the spiraling cost of labor and to offset rising food prices, which together reportedly take 75 to 85% of the restaurant-operator's gross income. The net-profit margin in the restaurant business is reported

Single-service packaging *has long had enthusiastic approval of the restaurant field as cost accounting has proved the savings inherent to this method of portion control and also in reducing labor costs.*

PHOTO COURTESY RAYTHEON CO.

Cook-it-yourself *electronic ovens in cafeteria at Nuclear Metals, Inc., West Hartford, Conn. Employees themselves transform frozen, pre-cooked meals into steaming hot lunches in seconds. Food is packaged in resin-coated paper plates with transparent film covering, suitable for heating by microwave energy.*

to be only 3.3% before taxes. Anything that can bolster profit, therefore, is welcomed eagerly.

Reduction in operating cost is the big reason behind the fast-growing development of the new heat-and-eat packaged prepared frozen foods that are opening up an astronomical potential for packaging, incorporating low-cost, disposable foil pans, cook-in plastic and foil bags, formed plastic containers.

Heat-and-eat labor savers

Eating places everywhere, apparently, are adding to their menus new packaged items that require no kitchen expansion and often permit a significant reduction in their staffs. The time-consuming chore of preparation is shifted to food processors, or to the central commissaries of large restaurant chains that are now set up to prepare and package food.

Already, Armour & Co. is offering any food-service operator a menu consisting of 20 frozen "Continental Cuisine" products, packaged in individual-serving, compartmented pouches, made of polyethylene-polyester films, that separate components of the entree. The individual Continental Cuisine pouches are shipped, 12 to the corrugated carton, to the food-service outlet.

To serve the Armour entrees, it is necessary only to heat the pouch 10 to 12 min. in boiling water, open and arrange the products attractively on a plate. This technique has the same appeal to the restaurant operator that it does to the housewife: no pots and pans to be scrubbed, no leftover or wasted food and no variation of prices with the season. On a moment's notice, a meal of gourmet quality with full profit and portion control—selected from an impressively long menu—can be served by any employee who can boil water.

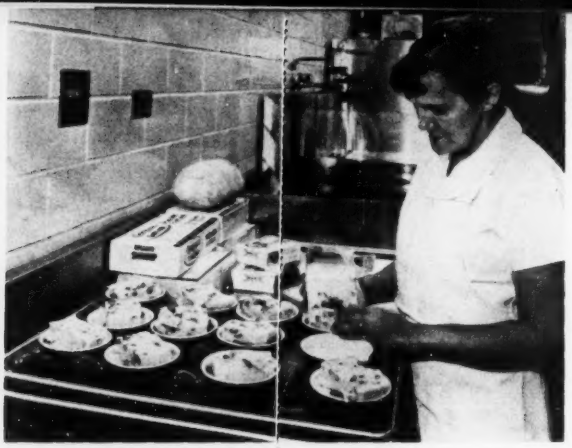
Armour recently reported that some 600 establishments were receiving and serving these special meals.

And what Armour is doing, many other large food processors are expected to be doing in a similar way in a matter of months. Some authorities predict a billion of these meals annually by 1963.

Wilson and Fox now offer institutional pouch packs and in the Chicago area, Minit-Dinners, Inc., Deerfield, Ill., is set up to supply restaurants with a full line of frozen-meat dishes and casseroles. One of its important customers is Bellringers Restaurant, Wilmette, Ill., which has been able to add about 40 hot items to a menu which previously included only cold cuts and fried items from a counter grill.

Du Pont estimates that 15 million boil-in pouches were used by the institutional trade last year and predicts 75 million by 1965. This firm also points

Restaurant service *of gourmet foods is made easy with Armour's compartmented pouches for 20 "Continental Cuisine" entrees which can move from freezer to table in a matter of minutes. Service by untrained help requires only 10 to 12 minutes boiling of the unopened polyester-polyethylene pouch. This is one rapidly growing trend, enabling small restaurants to offer first-class menus. Pouches are shipped 12 to a carton. Pouches by Continental Can, using Du Pont "Mylar," and by Spec-Fab, using Minnesota Mining's "Scotchpak" polyester.*



Pre-packaged frozen entrees *are simply transferred to casserole dishes before oven heating at Red Balloon Restaurant on Chicago's north side, where they are using every quality convenience food they can get their hands on. Three food-preparation employees are all that are necessary at any one time for this restaurant, which has a 4,000-sq.-ft. seating capacity. The 25-by-8-ft. kitchen area is in full view of the customers. An ordinary kitchen for a restaurant this size would be 75% larger—a significant example of what packaging is doing for the food-service industry.*

Larger quantities, *sufficient to supply a service pan in cafeteria steam table, are featured by On-Cor Food Products. Pre-cooked and frozen in foil pan, this 2-lb., 8-oz. quantity of beef chop suey needs only to be heated in the oven after its paper lid has been removed. Package is also aimed at retail sales for large families. Foil pan by Ekco-Alcoa.*

out the economy of heat-in-the-bag portion packs of vegetables—such a pack of frozen peas costs 6 cents, already seasoned and requiring only heating, whereas the final cost of a 3-cent portion of regular frozen peas may run as high as 10 cents, due to hidden labor, inaccuracy in portioning and other factors that add to costs.

Some restaurants already are being built specifically to use prepared, packaged frozen foods, according to the *Wall Street Journal*. One is the Red Balloon, erected on Chicago's north side by the John R. Thompson Co.

"We use every quality convenience food we can get our hands on and we're cutting the labor force by one-third of the usual number right at the start," says Ernest E. Renaud, general manager of Thompson's Roadside Division. "We won't have a single baker or skilled cook there."

Red Balloon's frozen entrees will come from Armour & Co. and from Thompson's own plant, while packaged, frozen bakery goods are to be provided by the Sara Lee Division of Consolidated Foods Corp. If the 165-seat Red Balloon operation is successful, Mr. Renaud says, others like it will be established across the country.

Howard Johnson Test Kitchens are involved in the development of frozen French cuisine items in cook-in bags that are already on some Howard Johnson menus and are planned for broader distribution later. Mentor of the project is Pierre Franey, renowned ex-chef of New York's plush Le Pavillon Restaurant.

In New York, The Brass Rail is pioneering a development that carries the heat-and-eat idea of institutional service still farther—with almost unlimited possibilities seen for offices, industrial plants and schools. More than 20,000 industrial plants throughout the country still have no hot-lunch facilities for their workers, Brass Rail points out.

Some 60 pre-cooked frozen complete meals are now being packaged at the Brass Rail's own commissaries in pressure-formed, high-density-polyethylene trays sealed over the top with printed polyethylene-coated cellophane. This is the first full-scale use in the heat-and-eat field of the high-density-polyethylene tray, which is believed to have a big future because the high-density resin withstands temperatures up to 250 deg. After heating, which may be in regular ovens or with high-frequency heat, the packages are table-ready for eating out of the tray package. A tear strip facilitates opening.

These packaged items are designed primarily for delivery to food-service operations where kitchen space is limited or non-existent. In the latter cases, the packaged menus are dispensed through specially designed vending units that heat the meals.

The first commercial installation of The Brass Rail system is at the New York brokerage firm of Carl M. Loeb Rhoades & Co., where 600 to 800 employees use the mechanical cafeteria. Machines are stocked daily with three different packaged meals—108 to the machine, 36 in each of three columns. Prices range from 35 cents to 75 cents. About 2¾ hrs. before serving time, the machine is loaded with the day's packaged menu and heating begins. The packages can be kept heated as long as the cafeteria is open for service and the food reportedly stands up well through an extended period of several hours in the sealed container.

Institutional packages for General Foods tell a graphic story

Line drawings *as well as color are used on Jell-O gelatin desserts so that products can be identified and handled by employees who cannot read English.*

Step-by-step preparation *is shown for food-service operator on Minute Mashed Potatoes can. In handy, tabular form, the back-panel copy shows ingredient quantities to yield specified number of servings. General Foods package designs by Walter Dorwin Teague Associates.*

Standard restaurant equipment *is used in General Foods Institutional Div. test kitchen on the theory that all products and packages should be studied under conditions simulating those in mass-feeding kitchens.*

Metered contents *of Jell-O pie-filling and pudding packages are planned so that preparation in all instances requires exactly 1 gal. of milk, although package dimensions differ due to product variations. This reduces time and motions in measuring, is easily understood even by inexperienced workers.*

Apart from these exciting packaging operations is the packaging development demanded by specialized food-catering services, similar to that offered by Lou G. Siegel, Inc., one of New York's leading kosher restaurants. This firm is packaging complete heat-and-eat frozen kosher meals in foil trays supplied to hospitals and other institutions, enabling them to serve patients who require food prepared in compliance with Jewish dietary laws. The packaged meals, of course, may be stored indefinitely in their frozen state in the hospital freezer until needed.

Less dramatic, perhaps, but even more important is the need in restaurants that take pride in the preparation of their own menus for packaged foods with built-in convenience that can be worked into the more conventional type of operations.

To win a competitive edge

And it is in this area that food manufacturers and processors have one of their best opportunities to use packaging ideas to win a competitive edge among those food manufacturers who are capitalizing on the trend to eating out.

Companies like General Foods, General Mills,

Easy disposal *is an important requisite of packaging for food-service operations. This is just one feature of sturdy, protective kraft-polyethylene-foil bags with inside polyethylene coating used for Kraft's Nonfat Dry Milk Crystals and Chopped Onions for the institutional market. Chemical analysis and reconstitution quantities are printed on the reverse side. Bags by Crown Zellerbach.*

Pillsbury, Kraft Foods, The Borden Co., Standard Brands, H. J. Heinz, Nabisco, Sunshine, The Nestle Co., American Sugar Refining and many others are well aware of this and, of recent years, have been putting considerable emphasis on packaging to solve the food-service-industry's problems.

The approach, depending on the type of product, takes several directions: (1) portion control, (2) convenience of batch preparation; (3) proper package sizes, (4) easy-to-follow directions.

Improved graphics are important to maintain enviable brand reputations and much attention is being paid to this aspect.

Already almost universally accepted are the portion-control and labor-saving advantages of single-service packages for instant coffees, cocoa, teas, jams and jellies, condiments, salad dressings, sugar, salt and pepper, powdered milk and cream, crackers, cookies, melba toast, soups and fruit juices.

One of the most impressive success stories in this field is the expansion of Kraft's line of single-service "Portion Control" packages, started a few years ago with jams and preserves in individual pressure-formed vinyl packages covered with polyethylene-coated cellophane, and now including ketchup, mustard, salad dressings, pancake syrups, dessert toppings, honey, cocktail and barbecue sauces—well over two-dozen items in all.

Well known, too, is the way the restaurant trade has taken to instant mashed potatoes, dehydrated soups, cake mixes, canned and frozen fruits and vegetables, pre-portioned cuts of steaks, chops and hamburgers—where convenience is built into the product rather than the package, although proper packaging is a vital consideration.

The Packaged Convenience Foods Institute estimates that restaurants will spend more than $600 million this year on convenience foods—a figure which does not include such standbys as canned and frozen vegetables and meats cut to order.

The H. J. Heinz Co., which has won enviable acceptance in the restaurant field for its single-service canned soups, foil packets for ketchup and a new polyethylene-coated cellophane pouch for single-service mustard, points out the trend to new semi-prepared products that combine several ingredients into one packaged unit, thus eliminating numerous preparation steps in the institutional kitchen.

Even more complex is the question of tailoring batch sizes for kitchen convenience and economy.

Standard Brands (Chase & Sanborn) claims top place in coffee sales to the hotel and restaurant industry. Standard Brands estimates that it takes nearly 200 different package units, ranging in size from 2-oz. to 100-lb. bags, to accommodate all the roasts, grinds, blends and instant products to meet restaurant requirements for different-sized urns, vacuum bottles and other types of coffee-makers. And this is exclusive of single-service packets.

Standard Brands pays much attention to food-service-operators' requests for packaging that offers batch convenience. For years the contents of its Royal dessert packages have been planned to provide exactly the correct [*Continued on page 188*]

Demonstrations *at conventions are important phase of promotion of packaged institutional foods. Here, Borden baker is demonstrating convenience of preparing pie-filling mix at National Restaurant Assn. convention.*

Food Law seeks an 'open end'

Faced with an inflexible deadline March 6, F&DA has appealed to Congress for a new law extending indefinitely its time for clearing a mountain of packaging-additive petitions

As this issue closed, thousands of interested packagers and their suppliers were still without definite word as to the status of Food Additive enforcement after March 6, the final deadline permitted by existing law. But on Feb. 7, Congressman Oren Harris (D., Arkansas), chairman of the House Interstate & Foreign Commerce Committee, introduced a bill (H. R. 3980) to put an "open end" on the Food Law at the discretion of the Food & Drug Administration. The bill represents an immediate response by Congress to an appeal by F&DA for more time to test food and packaging additives. It was referred to committee for hearings, not yet scheduled.

Best advice: Watch your newspapers.

The 1958 law defines a food additive as any substance which is added either directly or (as is the case with packaging ingredients) indirectly to foods. Each must be rated "generally recognized as safe" or enjoy "prior sanction" by F&DA. Only about one-tenth of the estimated 2,000 chemicals used in packaging have so far been given clearance in these two categories. The rest, which were granted a one-year extension for further testing, must now gain clearance from F&DA via formal petitions.

As of mid-February, there was a host of petitions on many major packaging materials still not acted upon and long-term animal feeding studies still in progress on other important packaging chemicals. In just the last 30 days, two important petitions covering several hundred chemicals used in adhesives have been filed by the Adhesive Mfrs. Assn. and the Syracuse University Medical Test Center. Another petition has been filed by Hercules Powder Co. for 20 chemicals used in paper coatings, adhesives and inks. And Monsanto Chemical Co. has filed a petition for the use of styrene-methyl acrylate and styrene maleic anhydride polymers used in coating paper packaging materials.

Now F&DA concedes its inability to meet the deadline—postponed by its own action from a year ago—and is presently studying more than 300 petitions for clearance of both food and packaging additives. The "open-end" amendment now being sought would permit F&DA to grant extension for further testing for an indefinite period of time.

Whether this measure can be pushed through in time—and whether its provisions will be applied to the many important petitions for cellophanes, polyethylenes, adhesives, paper chemicals and other compounds—is uncertain.

In a letter to Congressional leaders requesting the extension, Arthur S. Flemming, retiring Secretary of Health, Education & Welfare—seven days before leaving office—described the need for legislation as urgent, saying F&DA could not process all essential food-additives petitions by March 6. Despite the change in administration, this view is still held by the top civil-service administrators who will guide F&DA. There has been no comment by the new HEW Secretary, Abraham Ribicoff.

Deputy Commissioner John L. Harvey recently revealed that the agency's estimate of 750 to 800 food additives, contained in a study submitted at the original Delaney Committee hearings, was far too low and that by last March F&DA had extended more than 3,000 direct and indirect additives for further testing. This figure does not include the additives given final clearance under the classifications of "prior sanction" and "generally recognized as safe" (GRAS). William W. Goodrich, assistant general counsel for F&DA, has also described the problem as "far greater than ever anticipated."

What happens next?

Since most packagers arrived at this conclusion long ago, the question now is: "What next?" As of early February, in the Capital most observers felt that F&DA either would delay action on important materials until just before the deadline, or would employ the new extensions, if granted, to gain time for more detailed consideration of the petitions.

Secretary Flemming, in his request for Congressional action, specifically noted that the pharmacological study on paper sizes would not be completed until April, 1962. A study on waxes is expected to be delayed until November, this year.

As proposed by F&DA, the new bill would permit extensions only for the [*Continued on page 190*]

A robot redesigns Vicks

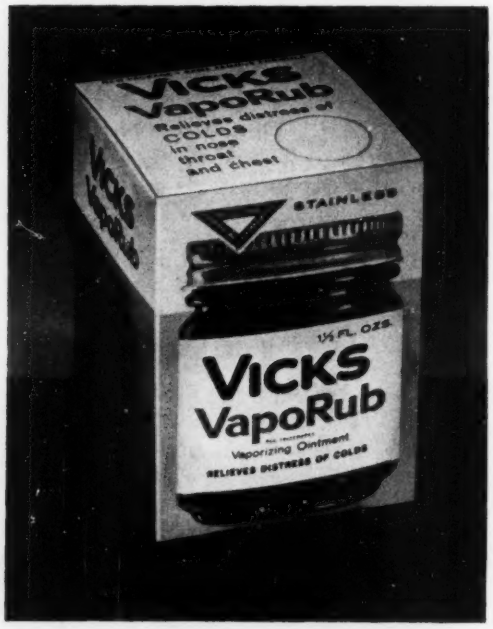
Pushbutton poll taker, mounted on store shelves, demonstrates ability to gather package opinions quickly and enables VapoRub makers to choose between proposed new designs

A slick little black box that works something like a miniature voting machine has caught the attention of packagers because it offers a new, quick way to count consumer opinions automatically in supermarkets.

The little machine, not much bigger than a cigar box, mounts on the edge of a store shelf like a shelf talker. Operated by pushbuttons and springs, it is self-contained, requires no current. It is designed to tabulate several thousand preferences for package design, colors, shapes, size, labels, copy and other information in a matter of hours, rather than the several weeks of time that would be required to conduct personal interviews.

Its effectiveness is demonstrated by the experience of Vick Chemical Co. Division, Richardson-Merrell, Inc., whose new Vicks VapoRub package is among the first on the market to have been proved by the new automatic preference testing method.

New Vicks design *showing color reproduction of familiar Vicks jar was found to be most popular by both machine tests and personal interviews.*



The results are significant because Vick Chemical conducted consumer preferences by conventional personal interviews at the same time that the little machine, which takes up no more than 10 in. of shelf space, was automatically counting 3,000 votes in a selected group of metropolitan New York and New Jersey supermarkets.

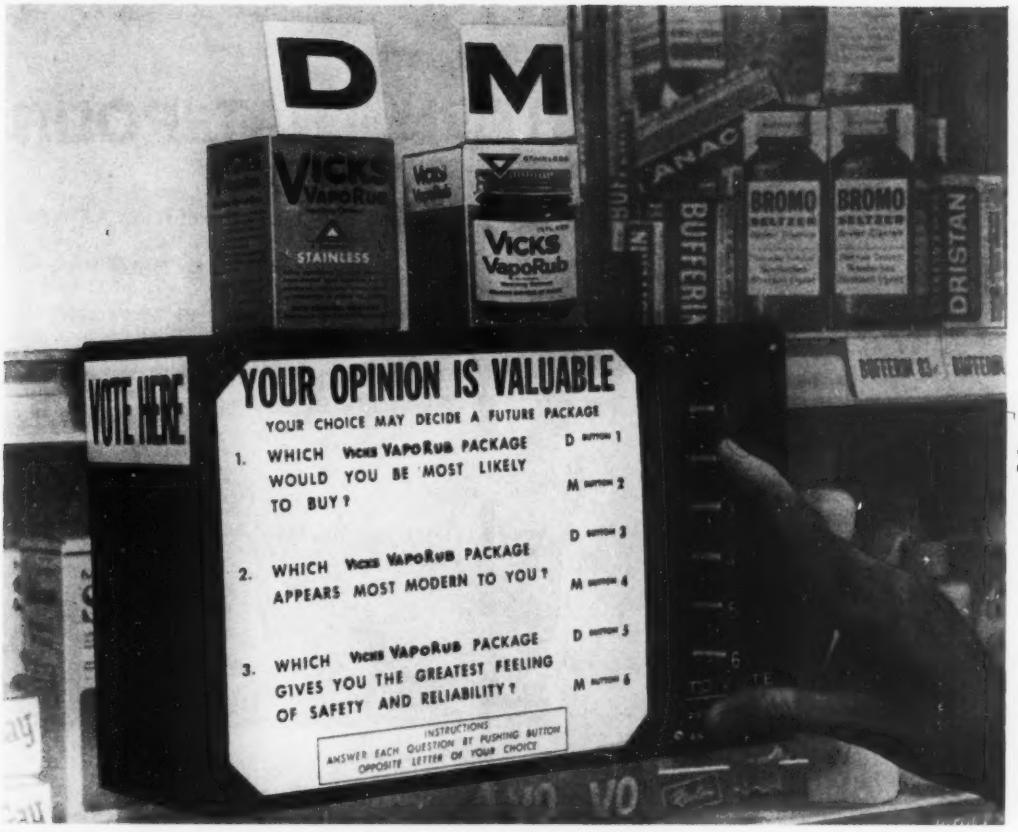
When the studies were compared later, according to Vick Chemical research people, the machine results coincided almost identically with those obtained by the personal interviewers. The 3,000 machine votes were obtained in three days, whereas it would take 30 man-days to obtain the same information by personal interviews, the company says. Cost for the automatic testing service was estimated at about one-fourth to one-fifth that for personal interviews in the same quantity.

Says Tom Dunkerton, research manager for Vick Chemical: "The automatic tester appears to be an effective, economical method to obtain a quick, large-segment pattern of consumer reactions. The machine-gathered preferences, of course, give no 'reasons why,' but such information can be obtained by probing deeper with personal interviews."

The compact machines, as used for Vicks, were equipped with six buttons, corresponding to numbered questions on a programming card attached to the face of the instrument. Packages to be compared were placed in full view above the little black box. Consumers registered their preferences by pushing buttons in accordance with their choices.

The intriguing machine and a sign above it suggesting, "Vote here" and "Your opinion is valuable," has a psychological effect that apparently makes shoppers want to try it and gives them the feeling that they are having a part in the selection of a package, it is said.

The machine has the advantage of eliminating personal suggestions or interpretations which are sometimes hard to avoid in personal interviewing.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VICKS VAPORUB
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VOTE HERE
YOUR OPINION IS VALUABLE
YOUR CHOICE MAY DECIDE A FUTURE PACKAGE
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M BUTTON 2
2. WHICH VICKS VAPORUB PACKAGE APPEARS MOST MODERN TO YOU?
D BUTTON 3
M BUTTON 4
3. WHICH VICKS VAPORUB PACKAGE GIVES YOU THE GREATEST FEELING OF SAFETY AND RELIABILITY?
D BUTTON 5
M BUTTON 6
INSTRUCTIONS
ANSWER EACH QUESTION BY PUSHING BUTTON OPPOSITE LETTER OF YOUR CHOICE

Pushbuttons *register opinions on two Vicks VapoRub packages automatically, like a voting machine. Packages are being tested in full view on top of box. Shopper simply pushes the buttons in accordance with numbered questions on face of machine. Machine can count thousands of preferences in a matter of hours. ("D" and "M" are test codes.)*

The machine has a time-release mechanism of a few seconds on each spring-actuated button, which avoids the possibility of a curious child, for example, pushing one button repeatedly. The vote count appears on a meter inside the machine, which is accessible only to the service man who has a key.

Vick Chemical tested out several suggested designs for a new Vicks VapoRub package. As shown in the photograph, two alternative packages were shown atop the machine, labeled "D" and "M." Machines were located in carefully selected stores as part of the preference-testing firm's programming service.

Three questions, as shown, were asked on the printed card attached to the front of the machine:

1. Which package would you be most apt to buy?
2. Which package appears most modern?
3. Which package gives you the greatest feeling of safety and reliability?

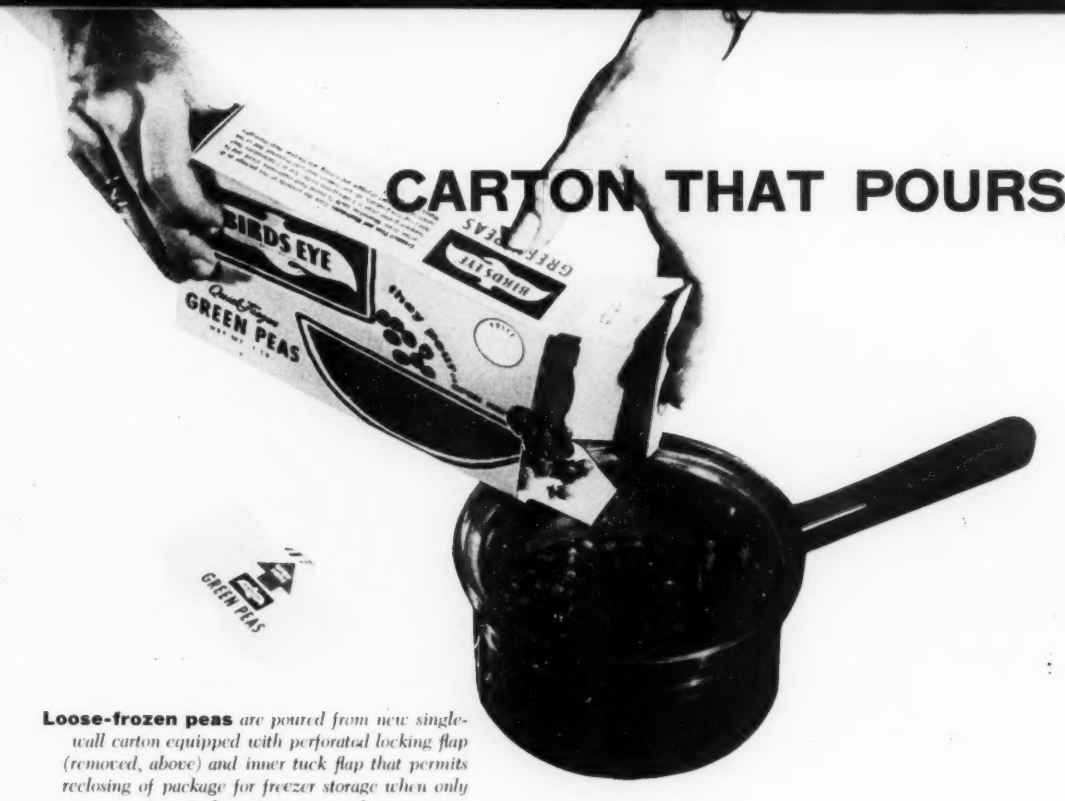
When all answers were tallied in the Vicks test, the new package showing a color reproduction of the familiar Vicks jar was found to be the most popular, winning by a considerable margin over the company's old design.

The preference tests were supplemented by many other considerations, including instrument tests for visibility ratings. No packages with such wide acceptance as that enjoyed by Vicks ("209 million Vicks packages used yearly") are changed casually. But Vick Chemical, apparently, is sufficiently impressed with the ability of the machine preference-testing procedure to provide a fast, economical check, that it is using it on other products. It has been pointed out that the machine method is particularly advantageous for products with peak seasonal demand, such as cold remedies, to get quick reactions at the height of the selling period.

The machines are owned, installed and operated in selected supermarket locations by the testing corporation. The client purchases the service, which includes compilation of results, at prices charged for the desired coverage. Other companies reported to be using the service are General Electric, Campbell Soup and Sears, Roebuck.

SUPPLIES AND SERVICES: Mechanical testing machine and service by Automated Preference Testing Corp., 120 E. 56 St., New York 22.

CARTON THAT POURS



Loose-frozen peas *are poured from new single-wall carton equipped with perforated locking flap (removed, above) and inner tuck flap that permits reclosing of package for freezer storage when only part of the contents is used at one time.*

Technical barriers that have prevented any recent major changes in the cartoning of frozen vegetables appear finally to have been surmounted with the test marketing by General Foods' Birds Eye Division of a striking new easy-to-use single-wall locking carton for loose-frozen peas.

Features of this 16-oz. "family-size" package are:

1. Because the peas are individually quick frozen, rather than block frozen, the housewife can readily use part of the contents, returning the remainder to the freezer for later use. In this way, the new carton provides the same partial-use convenience as do polyethylene-bagged loose-frozen fruits and vegetables. This is facilitated in this instance by a special double-flap construction on one end that permits easy opening and reclosing.

2. The conventional overwrap is replaced with a thin outer coating of low-density polyethylene and a similarly thin inner layer of wax which together, Birds Eye researchers believe, afford the same degree of barrier protection provided by the present carton-plus-overwrap container.

3. Cooking directions and recipes are printed on the carton itself, thus retaining for the housewife essential information frequently damaged or lost when an overwrap is discarded.

When taken in context with other recent single-wall applications for specialty foods* and current testing by Birds Eye of an all-plastic package for both frozen fruits and vegetables†, this pace-setting carton exemplifies the sweeping changes in frozen-food package materials and construction now under way in this important segment of the food industry.

Since the new Birds Eye package has just been introduced in six test markets scattered throughout the country, no facts are available yet on consumer acceptance. But frozen-food men have been aware for some time that housewives want a carton that is easier to open and one which will retain the cooking directions. Also, the success of the polyethylene bags of fruits or vegetables—marketed in various areas by Birds Eye and other packers—appears to prove the desirability of a loose-frozen pour-out product. Company officials believe, however, that the new carton pack will not in any way replace the larger-sized bag pack.

Convenience is the overriding feature of this container and it is expected to provide enough merchandising advantages for Birds Eye to offset the somewhat higher cost of the container compared with present overwrapped cartons.

To open the new package, the consumer simply punches a thumb tab—prominently identified on both the face and an end of the package—and tears off an outer, perforated locking flap. A second flap, of tuck construction and located under the first flap,

*See "Frozen Food Single Wall," Modern Packaging, Dec., 1960, p. 96.

†See "Birds Eye Plastic Pack," Modern Packaging, Jan., 1961, p. 164.

FROZEN FOODS

Picking up a pour-and-store idea that scored a booming success in film bags (see this month's Cover Story, p. 102), Birds Eye tries a single-wall carton with convenient flap reclosure

Quick opening *is accomplished by thumb pressure (upper left) on indicated semi-circular tab. Thumb and fingers pull away both locking and tuck flaps.*

is then opened to release the loose product. The second flap can be retucked for freezer storage. This construction is similar to one used previously on a glued-flap carton for spices**.

The end-loaded carton is constructed of 15-point bleached sulfate board. The external polyethylene coating is applied over the printing at a weight of 5 lbs. per ream (about $\frac{1}{3}$ mil) to provide a scuff-proof surface that effectively retards water-vapor transmission at freezing temperatures. On the inner surface, the carton is coated with a "minimum amount" of wax to prevent soaking and to add further barrier properties. End flaps carry two locking tabs for greater security.

An unusual four-color gravure-printed design carries out the free-pouring theme with reproductions of peas tumbling into a bowl. A legend, "They pour . . ." emphasizes this advantage. On one side of the package the design is printed horizontally and on the other vertically, to provide flexibility of display in retail freezer cases. Directions for cooking and recipes are restricted to the side panels.

Following the completion of present tests, Birds Eye will evaluate reports on consumer reaction to determine the future for this container.

SUPPLIES AND SERVICES: Cartons by American Can's Marathon Div., Menasha, Wis.

**See "Glue Flap That Tucks Back," MODERN PACKAGING, MAY, 1959, p. 82.

Clean graphics *are believed by Birds Eye marketers to offer strong consumer appeal by spotlighting convenient opening and pouring features. Horizontal design on one side of carton and vertical on other provide display flexibility.*

Non-frozen boil-in-bag meats

Swift & Co., Chicago, has introduced a line of six non-frozen boil-in-bag meat products for national distribution. While the pre-cooked items must be kept under refrigeration, they do not require freezer storage and may be eaten cold if desired. For hot meals, the packages are simply immersed in boiling water for a few minutes. Swift is counting on these elements of convenience to help make its new line popular among retailers and consumers alike.

The new products are sliced beef, pork, ham, turkey, frankfurters and spare ribs, all in barbecue sauce. They are vacuum packed, in 8-oz. quantities, in pre-formed polyethylene-coated polyester pouches. Wall thickness ranges from 2½ to 3 mils, depending on the product.

Pouches for all these non-frozen meat specialties are printed in red, yellow and white. A broad unprinted area on the face of each package offers ample product visibility. Notches on opposite side seams facilitate tear opening. Swift is shipping its new line of boil-in-bag products to dealers in easy-to-handle 12-pack corrugated cartons. *Preprinted pouches by Milprint, 4200 N. Holton St., Milwaukee 1, and Standard Packaging, 200 E. 42 St., New York 17.*

Ideas in Action

Motor oil in high-density polyethylene bottle

The high-density blown-polyethylene bottle is on the threshold of predicted great expansion. Already a smash success in the liquid-detergent field, it has been adopted for Esso outboard motor oil in Canada by Imperial Oil Co. This application may be the forerunner of widespread use of plastics for oil products in small quantities.

Replacing the traditional rectangular metal can, Imperial's tough, oil-impermeable polyethylene bottle offers ease of gripping and pouring. The translucent container, capped with a red polystyrene screw closure, is four-color printed around its circumference by the hot-transfer method. Label features include use illustrations, directions for mixing the oil with gasoline and a calibrated scale which enables the user to determine exactly how much oil he is using in the mixture. Flanges at the top and bottom of the bottle retain its rigidity when stacked and also protect the label surface from dirt and damage when the container is on its side. *Polyethylene bottle by Polybottle, Ltd., 120 Tycos Dr., Toronto. Decoration by Therimage process, Dennison's Howard Plastics Co. sub., Leominster, Mass.*

Drug-department glamour

Indicative of the importance of upgraded package appeal for popular-priced products, a lively "decanter derby" appears to be in progress among makers of liquid mouthwash. Vick Chemical recently introduced Lavoris in a "Sparkle Decanter" (see MODERN PACKAGING, Dec., 1960, p. 95). Now Johnson & Johnson, New Brunswick, makes a bid to establish self-selection appeal and brand remembrance for Micrin oral antiseptic—a new product—via an apothecary-style clear-glass decanter with a frosted polypropylene screw closure. J&J takes advantage of the container's shelf appeal by marketing it without benefit of a carton.

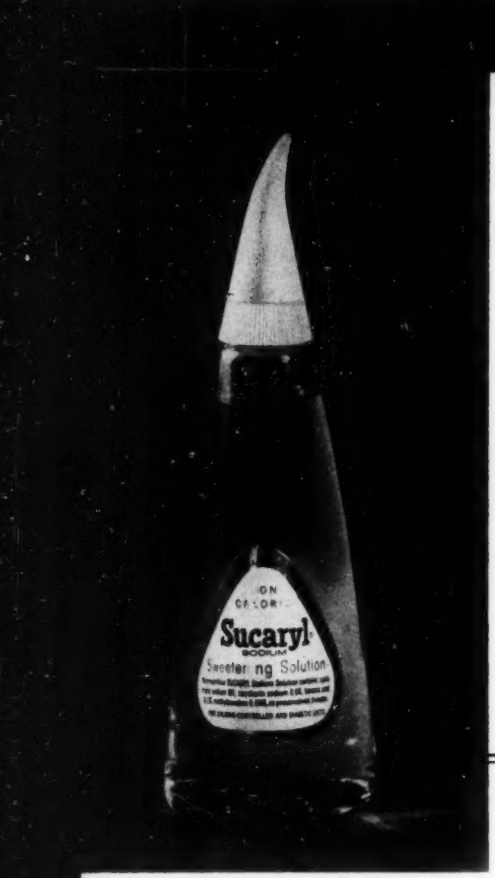
The new Micrin bottle is offered in two sizes, 7 oz. and 14 oz. Two paper labels are designed to suggest an ethical image while permitting maximum product visibility. The gold, white and blue oval label near the bottom of the bottle features a brand mark, incorporating a mortar-and-pestle, devised especially for the product. *Design by Donald Deskey Associates, 575 Madison Ave., New York 22. Bottles by Carr-Lowrey, 2201 Kloman St., Baltimore 30, and Wheaton Glass, Millville, N.J. Closures by American Can, 100 Park Ave., New York 17, and Gibson Associates, Cranford, N.J.*

More upgrading in the field of light-bulb packaging

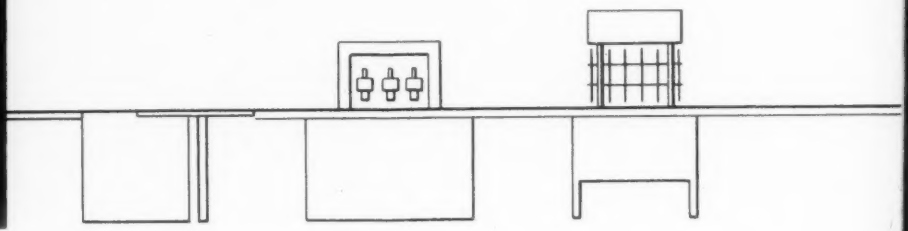
Westinghouse carries a step further the color coding of light-bulb packaging pioneered a year ago by Sylvania. Westinghouse's coordinated redesign program includes graphic symbols and a restyled trademark that upgrade appearance and facilitate shelf stocking and selection.

Three basic groups of family-identified packages have been designed: for standard inside-frost bulbs, for New Shape Eye Saving bulbs and for New Shape Beauty Tone tinted bulbs. Packaging for the standard line is a single-face corrugated sleeve with white background. Color-coded rectangular spots on all four sides of the sleeve identify each wattage (100 watts, red; 75 watts, blue; 60 watts, orange; 50 watts, green; 40 watts, brown; 25 watts, purple; 15 watts, cerise). Double sleeves are used for the packager's premium New Shape lines. The same color coding is employed as for the standard line, except that it appears as the background for product illustrations and graphic symbols (a heart and an oval) that help identify the Beauty Tone and Eye Saving styles. Westinghouse's new trademark is featured on all packages. *Redesign by Paul Rand, Weston, Conn.*

One line for two



Contrasting shape and size *of Abbott Laboratories' two Sucaryl bottles (here and on facing page) challenged production engineers. The trylon-shaped, 4-oz. container with its triangular cross-section and curved polystyrene cap was the more difficult, but the oval pint bottle also required several mechanical innovations. Both are now handled on the same production line.*



While the gracefully curved Sucaryl bottle is both a triumph of the designer's art and a big merchandising success, it posed some tough production obstacles. Here Abbott Laboratories' packaging manager discloses a classic example of adapting problem packages to practical production.

H. J. Oglesby

It took more than two years of engineering effort to achieve an automatic packaging line for our new 4-oz. Sucaryl table bottle, a tapered container with a triangular cross section that was chosen by our sales department to reflect the character of this non-caloric sweetener. Not only is the bottle contour unusual, but the cap is a pointed polystyrene closure with a curved tip—a cap shape never before handled on automatic packaging equipment. In addition, a triangular-shaped label had to be placed on one of the rounded corners of the bottle.

To complicate matters further, we also wished to handle a differently shaped one-pint bottle of Sucaryl on the same line. This container is a tapered, oval-shaped bottle with a sharp angle at the shoulder, a plastic drip-pour closure fitment and a tapered flat-top polystyrene cap—a totally different package shape from the slim 4-oz. table bottle.

It was specified that the packaging line for these bottles would operate at speeds of 150 bottles per minute for the 4-oz. size and 100 per minute for the pint size. And to promote the most efficient use of labor, the equipment was to be connected to form a rectangular, "closed-circuit" line.

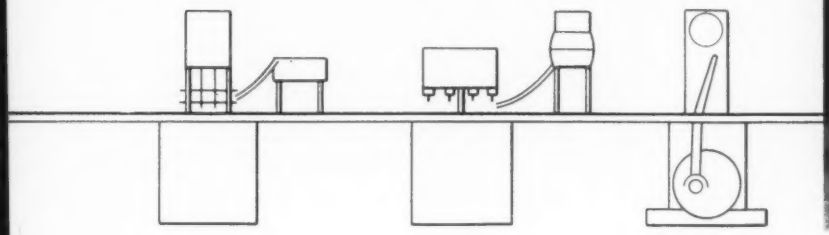
Because of the unusual shape of the 4-oz. bottles, it was decided to use an air cleaner for these containers instead of our previous racking and washing procedure. Additional new equipment included a rotary unscrambler, a filler, an applicator for the drip-pour plugs, and capping and labeling equipment. All of these machines except the filler (a standard 12-spout rotary unit) had to be specially adapted in one way or another to handle the two new bottles. Also, the line was equipped with a special transfer disk between the labeler and the packing conveyor, and custom-made packing racks were fitted to the packing-table conveyor. Only recently has the work on this line been completed and it now comprises the operations described below.

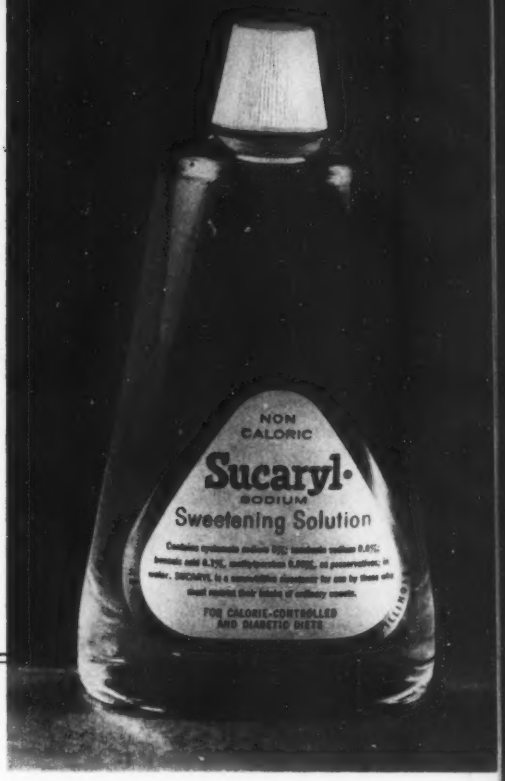
Unscrambling

At the start of the line, empty bottles are dumped by hand from reshippers onto the rotary unscrambler, which is equipped with two air vibrators that aid in aligning the unusually shaped containers. The reshippers are then manually placed on a sharply inclined power-driven conveyor which serves two

problem bottles

By arranging modified equipment in a 'closed-circuit' plan, Abbott Labs achieves up to 150-per-minute runs of its beautiful but hard-to-handle tapered containers for Sucaryl sweetener. By Herbert J. Oglesby*





purposes: (1) it automatically prints each case with product information by means of stenciling devices mounted on the sides of the conveyor and (2) it elevates the cases 3 ft. so they can travel by gravity on a roller conveyor to a position directly in front of the packing operators at the end of the line. The 4-oz. cases are printed on one end and the pints on both ends, since the latter are split-apart cases.

Cleaning

After unscrambling and aligning, the bottles pass by conveyor to the air cleaner. Here, the 4-oz. bottles ran through the equipment without a hitch.

However, a problem arose with the pint bottles. Its tapered shape and its sharply angled shoulder created a whirlwind action inside the bottle and a static condition that caused any small fibrous material to cling tightly to the inner walls. To overcome these problems, a great deal of experimental work was undertaken by the manufacturer of the air-cleaning equipment, as well as by our own engineers.

The manufacturer came up with the first improvement—an intermittent cam action that produced jets of air instead of a continuous blast while the bottle was in the cleaning position. Although this helped, it was not the final solution.

One of our technical men then undertook to develop a special cleaning spout with two small holes located about $1\frac{1}{2}$ in. from the end of the spout. Designed to prevent air turbulence from developing, this device solved both problems.

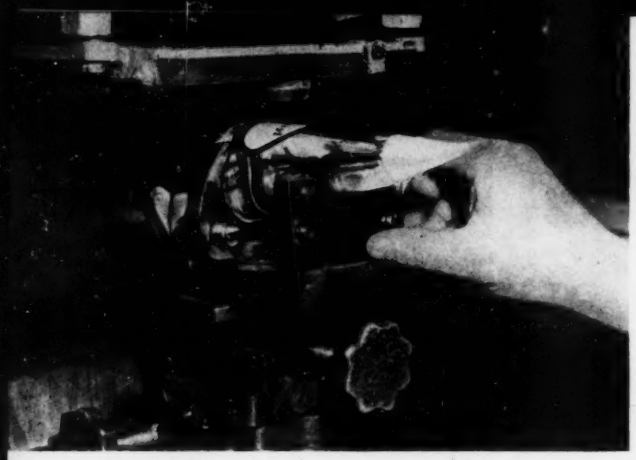
Plug insertion

To handle the special drip-pour plugs, which are made from polyurethane, a standard cottoning machine was rebuilt and a spiral vibrator was added to sort the plugs. After alignment in this latter device, the fitments are pulled from a chute by a rotating disk and picked up by special spindles equipped with friction-fit pins. Each plug is carried around on a pin, lowered into position and forced over the bottle lip by overhead spring-loaded cams. In this operation, the friction encountered during application of the plug was overcome by installing a small lubricating wick that moistens the lip of each bottle.

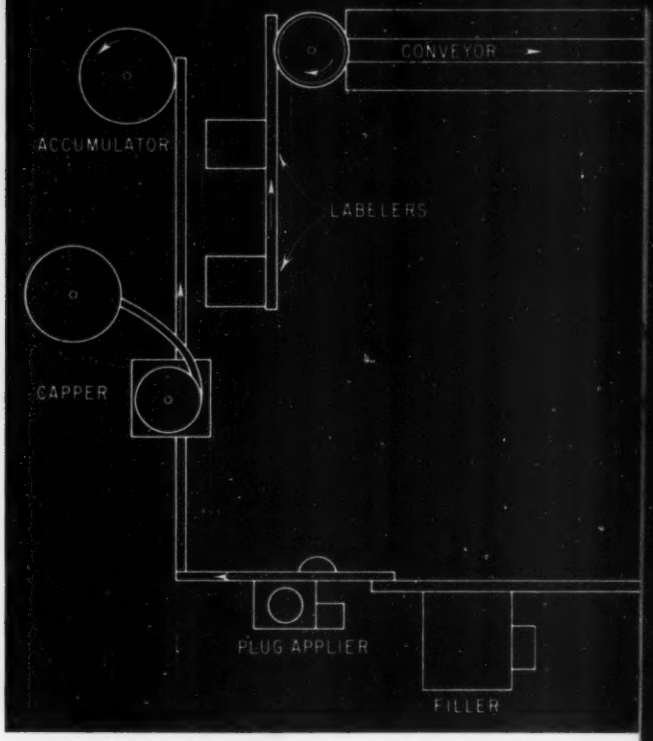
Capping

The bottles are next discharged onto the main conveyor leading to the capping machine. Because standard capping machines could not accommodate the pointed, irregularly shaped caps used on the 4-oz. bottles, our equipment was developed by a custom-designing firm that specializes in handling packaging components of unusual shape. However, unanticipated difficulties then arose in hoppering and feeding the caps. Because of its taper, the cap tended to wedge in the rails of the feed chute. Teflon

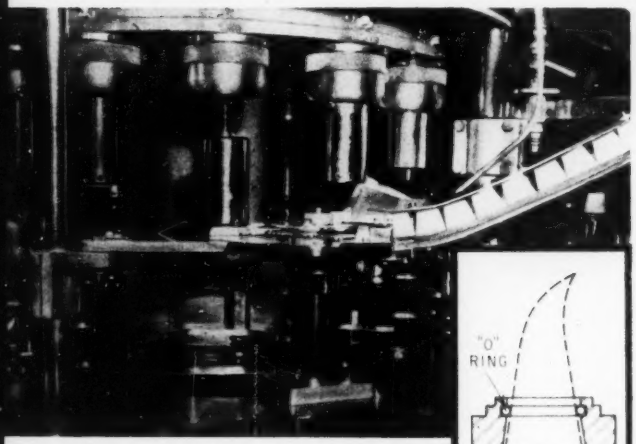
*Packaging Manager, Abbott Laboratories, Chicago.

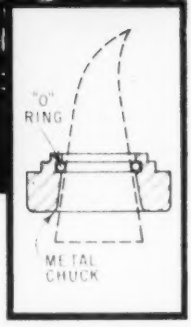


Labeling *is performed at present on two semi-automatic units equipped with special jigs to position the trylon-shaped Sucaryl bottle. Label must be spotted on one rounded corner. Automatic machinery now on order will increase labeling operation to the rated line speed.*



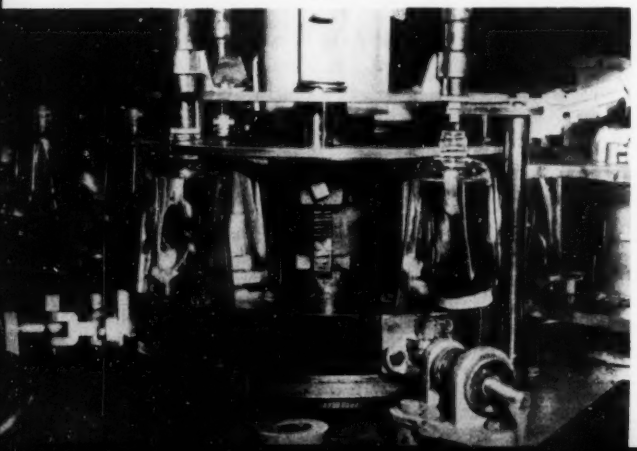
Closed-circuit line *comes together at unscrambler (lower right), where bottles are dumped and fed into the system clockwise. Emptied shippers move counter-clockwise on fourth leg of line, through imprinting, to case-off area.*





Capping *required developing a machine with special chucks containing friction-grip rubber O-rings (diagram, right). Device handles both conical cap for pint bottle (shown on machine) and tapered, curved cap for 4-oz. bottle.*

Plugging *of pint bottle with a polyurethane drip-pour fitment is done on a converted cottoning machine. A pin on each turret-mounted spindle holds a plug in position as it is snapped over bottle lip by cam action.*



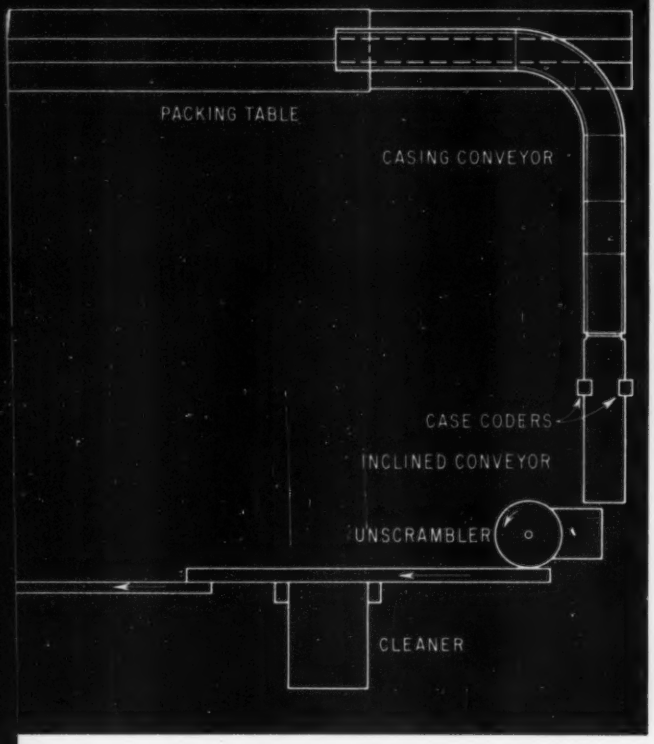
strips reduced the friction and minimized jamming, but even now it is necessary to coat the chute periodically with a silicone preparation.

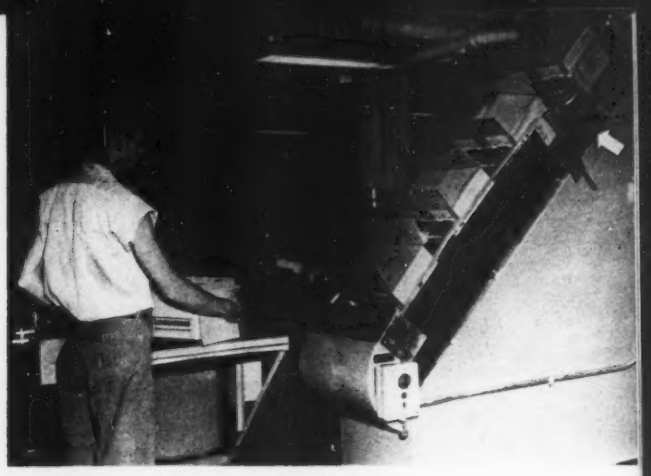
After the capper was installed, we found several other improvements necessary. Due to minor irregularities in the caps, a small percentage would not seat properly in the machine chucks. So each chuck was redesigned to incorporate a floating rubber "O" ring above the serrated edges. This device automatically adjusts to variations in cap dimensions and also grips the closures by friction, securing them in the chuck until they are applied. We also found that the rubber grippers which position the bottles during capping were subject to unusual wear. So we designed metal inserts with molded-rubber pads that can be replaced without sending the entire gripping mechanism to the manufacturer for revulcanizing.

Labeling

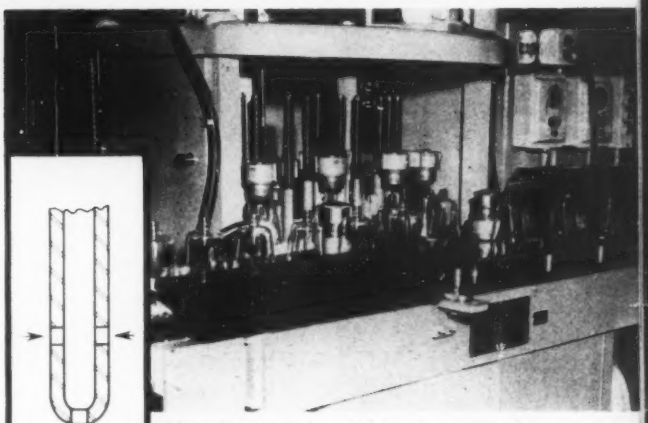
A labeling machine to handle both bottles was also extremely hard to obtain—and we are not yet finally equipped for this operation. At present, we use two standard, semi-automatic labelers with specially designed bottle-gripping devices to orient the bottle mechanically when it is placed in the holder. These holders were manufactured in our own shop.

The labelers are located on each side of the capper discharge conveyor. Two operators pick off





Uncasing *and alignment of empty bottles occurs at this corner of the line. Empty cases are elevated and imprinted (arrow) at the same time, then slide by roller conveyor to the case-off belt (out of photo at right). Meanwhile, the bottles are aligned by a rotary table, then move off to the left.*



Cleaning *is performed by a rotary unit that is adaptable to both bottle sizes. Equipment has special air nozzle (diagram, right) to prevent rotary turbulence and generation of static in pint bottles (running on machine in this photo).*

alternate bottles, label them and then place the bottles on a conveyor leading to a transfer disk that feeds onto the packing conveyor (which swings out to allow access to the labeling machines).

This labeling set-up now permits us to run at only 100 per minute on 4-oz. bottles and 80 per minute on pints. However, an automatic labeler now on order will complete our line and permit the top speeds for which the line was originally designed.

After labeling, the bottles are inspected and packed into display cartons and corrugated reshippers, which are finally palletized.

Our experience with this line has been good and we find that down time is at a minimum. Operating efficiency now ranges from 88 to 92%. We expect even greater efficiency of line operation after installation of the new automatic labeling equipment.

SUPPLIES AND SERVICES: Rotary unscrambler by Island Equipment Corp., Hialeah, Fla. "Rolacoder" case printer by Adolph Gottscho, Inc., Hillside 5, N.J. "Sanitair" air cleaner by U. S. Bottlers Machinery Co., 4015 N. Rockwell, Chicago 18. Rotary vacuum filler by MRM Co., 191 Berry St., Brooklyn 11. "Capem K-4" cottoner (converted to plugger) by Consolidated Packaging Machinery Corp., 1400 West Ave., Buffalo 13. Rotary capper by PMC Industries, Hackensack, N.J. "Pony Labelrite" by New Jersey Machine Corp., Hoboken, N.J.

Filling *is performed by a standard 12-spout unit that can be quickly changed over for handling either the pint bottles or 4-oz. containers.*

Full view *of both brand name and product identity is provided by Libby's new labels (upper photo), specially designed for shipper-display trays. Product name—on the old labels (lower photo) hidden by tray lip—has been raised to top in new labels. New tray lip repeats product name, company logotype, triangular symbol.*

Libby redesigns

Libby, McNeill & Libby, big Chicago food packer, is now winding up an extensive package redesign program which, in terms of number of products affected, is probably the most ambitious in Libby history. Libby will soon have its entire canned-goods line of several hundred items freshly labeled and in newly designed shipping containers.

Most significant aspect of the repackaging program: Both labels and shippers have been specifically designed for tray stocking,* which is now a big and booming supermarket trend.

Tray stocking is a simple packaging technique offering maximum convenience and point-of-purchase product promotion for retailers. Instead of stocking shelves with loose containers, dealers can place entire trays of packages on their shelves.

Most tray packs start with a tear-strip-opening shipper that permits stockroom boys to create one or two product trays out of a single shipper, or they can run a knife along indicated lines on the shipper to produce the same effect. The resulting shallow trays, each holding one tier of packages, are then placed on the shelves, where brand and product identification, printed so that it appears on the tray lip, provides added promotion. In addition to ease of handling and promotion advantages, tray stocking stabilizes package facings and reduces costly shelf-stocking time.

Libby is thought to be the first large food producer to convert to tray packaging on so large a scale. Adhering to the recommendations of the Super Market Institute and leading tray-stocking store chains, Libby has:

1. Moved the product name in all instances from the bottom to the top of the can label and unitized the product name with the Libby logotype, so that this essential information will appear above the $1\frac{1}{4}$-in. wall of the shipping-container tray.

2. Enlarged the brand name, product name and use illustration on the back of each can label to give the cans equal effectiveness whether they face forward when on display, or are turned around.

3. Made the canned-fruit labels more attractive with the addition of an eye-catching illustration of the fruits in their natural state.

4. Lightened or deepened some label colors in accordance with the results obtained in a survey to

*See "The Trend to Trays," MODERN PACKAGING, Sept. 1960, p. 101.

Front or back, *redesigned labels are equally effective, showing fruit in natural state (front) and in use in dominant full-color illustration (back). This permits dealers to face either side front and to turn tray around when it is half empty without re-arranging individual cans.*

In the biggest move yet to meet supermarket trend to tray stocking, all can labels as well as shipping containers have been redone for most effective displays in trays or on shelves

for trays

determine the color preferences of consumers.

5. Redesigned all shipping containers so that the product name in large type and the smaller Libby logotype and triangular symbol are repeated top and bottom on all four sides to make certain that the name won't be lost when trays are formed. Retailers have the option of four- or six-can facings, depending on how the four-by-six-can pack is turned, with no loss of brand-name display.

6. Added a non-skid finish to top and bottom surfaces of the corrugated shippers for more secure warehousing and in-store handling.

Libby's packaging changes are strictly graphic and require no mechanical or structural adjustments in containers or machinery, since Libby does not use a tear strip. However, the expenditure for printing plates and additional color for so many items is known to be large. Changing shipper design was the company's biggest [*Continued on page 196*]

SUPPLIES AND SERVICES: Perceptual and attitudinal can-label design research by Design Laboratory, Container Corp. of America, 38 S. Dearborn St., Chicago 3. Can labels and shipping containers are obtained from numerous sources.

Stockroom convenience *is one big advantage of tray packaging. Dotted lines on shippers tell the stockroom boy how to create two trays with two easy knife cuts. Trays convey cans during price marking, stacking and movement to the grocery-store shelves.*

SUCCESS STORY NO. 3 OF A SERIES

Early awareness of the sales-making convenience of individually quick-frozen fruits and vegetables in economy-size "pour-and-store" polyethylene bags gave an infant Western company a solid foothold in a severely competitive market. Along the way, it twice applied hard-won packaging experience to turn potential disaster into sales success

THIS MONTH'S COVER

Looking through a symbolic freezer coil, Artist Ray Cicero suggests the convenience of bagged, loose-frozen foods that can be partially emptied and reclosed for storage. Spring Kist pioneered the idea in the U. S.

An alertness to the merchandising potentials of a new frozen-food processing technique and an ability to solve critical packaging problems under the whip of necessity are the raw materials from which a Western produce packager has forged an impressive *Success Story*—one that reaffirms the power of functional convenience as a tool for driving a wedge into a tough, competitive market.

In the three years since its inception as a packager of loose-frozen vegetables and fruits in economy-sized "pour-and-store" polyethylene bags, Spring Kist Sales, Inc., Salt Lake City, has risen to top rank in this specialty. It now has distribution in 32 states and an annual volume of some 6,000,000 packages. While this is small compared with the volume of cartoned frozen-food output in the United States, it reportedly represents 50% of domestic bagged production—a rapidly growing trend now being joined by major brands. And Spring Kist is solidifying its position with a sound marketing program, to which it assigns 2 cents out of every sales dollar.

The remarkable achievement of this small company (75 employees; $3,500,000 annual gross sales) suggests the vast opportunities which

Convenience *and economy spelled success for Spring Kist loose-frozen fruits (left) and vegetables (facing page) in see-through polyethylene bags. The housewife can pour out just as much of the contents as she needs for one meal, then return the unused portion to her freezer. The bag is resealed with its original twist tie or a rubber band.*

FROZEN FOODS

are open to any packager who takes timely advantage of today's continuing advances in packaging and production technology.

When Spring Kist opened shop early in 1958, it did so against formidable odds. The company was butting heads at the marketplace not only with the entrenched, nationally pre-sold giants of the frozen-food industry, but also with ingrained consumer habit. With few exceptions, American housewives had not yet been exposed to the convenience of pourable frozen foods in easy-to-open, resealable multi-meal bags. They were used to buying such products frozen in block form in conventional waxed-paper-overwrapped 10- or 12-oz. cartons and consuming the entire contents at one family sitting.

But Spring Kist wasn't taking a blind stab with an untried packaging gimmick. On the contrary. The company's founders had very carefully studied the development by produce packagers in Australia and Canada* of a new freezing technique called IQF (Individual Quick Freezing), which permits the separate, instant freezing of each individual piece of vegetable or fruit. (An application of the free-flowing method in carton form is reported on p. 92, this issue.)

The obvious advantage of this process: Foods so frozen can be packaged and marketed in a free-flowing state, enabling consumers to use only as much of the contents as needed for one meal and to store the rest in the freezer—a convenience utterly lacking in cartoned, block-frozen foods. IQF also is reported to be faster than block freezing and to retain more product flavor.

Equally obvious was the choice by these packagers of polyethylene bags or pouches for loose-frozen produce. At about 33% less cost than comparable-content cartons with overwraps, the see-through film bag combines the convenience of product pourability and package reclosure with moisture resistance, superior strength and flexibility at low temperatures of frozen-food storage.

Armed though it was with the experience of these packagers, Spring Kist was nonetheless aware of the need to go to market with exactly the right package for its own products. After months of research,

*See "Frozen Foods in Bags," MODERN PACKAGING, Feb., 1959, p. 104.

Appealing array *of film-packaged Spring Kist frozen foods in a retail freezer case attracts this shopper's eye. Color-coded bags are printed over 80% of their surface, for light protection, yet provide clear areas at each side to measure the contents.*

including a thorough analysis of consumer attitudes, the company began the first cautious market test of twist-tied family-size bags in its home city.

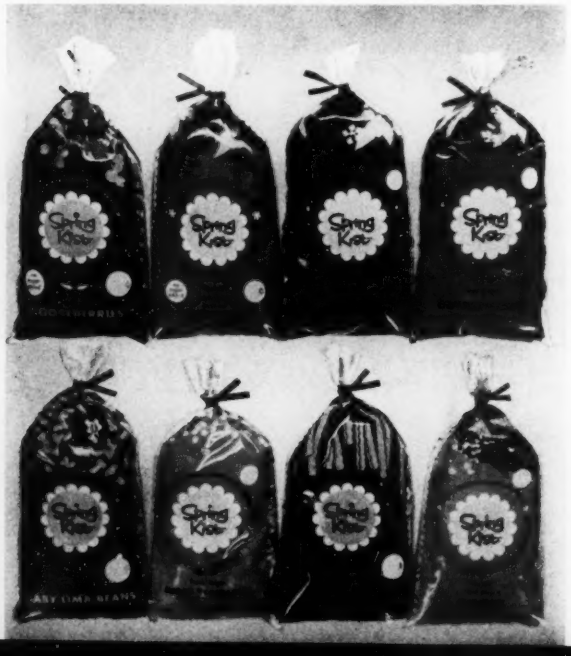
The first IQF products offered by the company were peas, corn and mixed vegetables in 26-oz. economy bags (the standard size of Spring Kist bags today, except for frozen French-fried potatoes, which are sold in 24-oz. quantities). The twist-tied, gusset-style polyethylene bag adopted for these items had a 2-mil wall thickness. To permit product visibility, a floral design was adopted that covered only about 50% of the prefabricated bag's surface.

Initial consumer acceptance was gratifying, but within 30 days reports of excessive bag breakage began to filter in. A switch to a 2½-mil bag eased the problem. Feeling more sure of its ground, Spring Kist opened a new plant in Wichita. By midsummer of 1958, its sales of bagged loose-frozen vegetables reached 7,000 cases a month.

Then came another skid in sales that could have spelled disaster, but instead—thanks to packaging awareness born of experience—resulted in an upturn in the company's fortunes that continues today.

The problem was twofold. Bag breakage again had become a problem, especially in handling for long-distance shipment. Equally critical, the package's transparency, intended to stimulate appetite appeal, actually was working in the opposite direction. The strong lighting in retail freezer cabinets was causing an alarming color loss in the products. The green in peas was particularly fugitive.

Eight varieties *of Spring Kist's loose-frozen vegetables and fruits are shown here. Company sales soared 600% in six months with the adoption of this package design and tough 3-mil polyethylene bag.*



It was evident to Spring Kist that long-range success depended on immediate development of a bag that would stand up under the most rugged handling and also solve the color-fading problem.

The new bag was not long in coming. By the end of the year, Spring Kist's supplier had produced a 3-mil, ungusseted bag made of polyethylene expressly formulated for high-impact strength. A completely new four-color surface design developed by the packager's advertising agency, Circuit & Eddington (a modification of the original floral motiff) provided 80% coverage with opaque ink, protecting bag contents from direct light. The sides of the new bag, not under direct light in normal display, were left unprinted to retain a visual gauge of contents.

The results were dramatic. Within six months, Spring Kist sales rose 600%. By the end of 1959, the packager was moving an annual volume of 1,800,000 bags, compared with 250,000 in 1958. Distribution was broadened to a 32-state area.

During this period of great growth, baby lima beans, cut green beans, French fries, and peas and carrots were added to the line. In mid-1959, IQF fruits were introduced. These products—strawberries, blackberries, blueberries, gooseberries and boysenberries—now account for 60% of Spring Kist's estimated annual volume of 6,000,000 bags.

The company's entire production is packaged in a standard semi-automatic operation, at an average speed of 28 bags per minute. After filling, the bags are automatically twist closed and sealed.

Spring Kist reports that the 3-mil bag's sturdiness and toughness make it easier to handle on filling lines. Testimony to the new package's esthetic, as well as functional, value is the fact that it has won two awards for graphics excellence. It was selected as one of the 50 best package designs of 1959 by the American Institute of Graphic Arts and it won a 1960 Gold Award presented by the Utah Advertising Artists Assn.

Looking to the future, Spring Kist management is well aware of the competition which will come as other processors enter the field of bagged loose-frozen foods. However, the company has the clear advantage of a three-year marketing head start, during which it has solved its packaging problems and familiarized consumers in 32 states with the Spring Kist name. And the packager is counting on a sustained, effective merchandising program (co-op, newspaper and point-of-purchase promotions have now been bulwarked by local television advertising) to perpetuate an outstanding *Success Story*.

SUPPLIES AND SERVICES: Prefabricated, printed bags by Allpak Co., 161 E. Grand Ave., Chicago 11, and Texas Plastics, Inc., Elsa, Tex., using U.S.I.'s Petrothene polyethylene.

Instant identification *with gardening and with proper use of the product are key merchandising advantages of this contoured pouch package for powdered weed killer, a new product of the American Chemical Co. A tear-off sprinkler nozzle forms a handy dispensing spout for mixing the powder with water. The bold black, white and red container is displayed by the dozen in a counter carton. Use directions are printed on back of the pouch.*

Contoured pour pouch

A flexible unit package, shaped to suggest its end use, makes debut in consumer-products field as a high-powered container for Amchem's weed killer

An intriguing idea in consumer packaging of dry products in small quantities is a flat pouch with a distinctive contoured shape that emphasizes the end use of the product. Now on the market is a pouch shaped like a watering can, adopted by American Chemical Products, Inc., Ambler, Pa., for its new powdered weed killer, "X-all." The pouch, packed in a display carton, is said to lift this product out of the welter of spray chemicals, giving it a commanding merchandising position on retail counters.

The new package contributes a fresh look to a product field that has long been dominated by liquid weed killers in cans and bottles.

Formed from a triple lamination of 25-lb. pouch paper, 15 lbs. of polyethylene (1 mil) and 0.00035-in. aluminum foil, the new pouch provides a hermetic package for the moisture-sensitive chemical. Shape of the pouch was selected because a watering can is the means most frequently used to spread the 2 oz. of water-mixed powder over 75 sq. ft. of ground. The nozzle portion of the package can be torn off by the consumer to provide a handy controlled pour spout for the mixing operation. Also a punch hole can be placed in the top seal of the pouch for hang-up display. Consumer acceptance has been excellent, according to Amchem officials.

Previously used only in the field of pharmaceutical sample packaging, contoured pouches run 10 to 20% higher in price than standard rectangular pouches holding the same amount of product. However, this package is competitive with almost every form of rigid miniature package and suggests a multitude of other applications for specialized products that could use extra merchandising punch.

A new method of pouch forming and trimming has been devised by the contract-packaging firm which developed this package and handles the packaging for Amchem. The special, vertical pouch-packing equipment will be made available to other packagers for in-plant operation if desired.

While full details on the mechanics of forming the pouch are not available pending patent applications, it can be revealed that the packages are initially made in rectangular form from a single folded web and contain the contour shape in the wide, four-sided heat seal. The product is filled through a central tube after three sides are closed, then a final, contour seal is employed to close the pouch. The unusual contour shape is cut in the sealing area of the package in a subsequent trimming operation.

SUPPLIES AND SERVICES: "IL-Conture Pak" and forming machinery by Ivers Lee, Newark 3, N. J. Laminated pouch material by Dow's Dobeckmun Co., 3301 Monroe Ave., Cleveland 13.

PACKAGING PAGEANT

1

1 Esterbrook Pen Co. adopts an aerosol spray container for rubber cement as an efficient new way to keep the cement from drying out and to eliminate need for a thinner. Cement is released by turning the can upside down and pressing on a sloping polyethylene applicator. Can has a toggle-type valve. Valve, Risdon Mfg., Naugatuck, Conn. Can, Crown Cork & Seal, Philadelphia.

2

2 A tough, new cellophane combination, designed to reduce breakage and extend shelf life, has been adopted for Anderson Bakeries' Bavarian Style Pretzels. It consists of two light-gauge cellulose base sheets with a thin polymer resin inner ply and nitrocellulose coatings on both outer surfaces. Savings on the production line and in shipping more than offset the material's slightly higher cost, Anderson says. Avisco 450 T-69 film, American Viscose, Philadelphia. Bag-making machine, FMC Simplex Plant, Oakland, Calif.

3

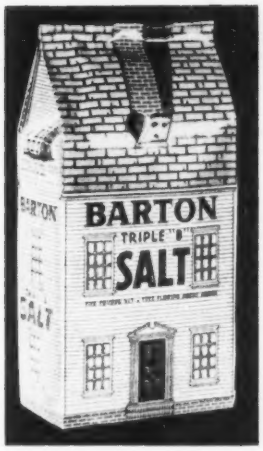
3 A sharp rise in sales of Cashmere Bouquet Talc is reported by Colgate-Palmolive Co. since its introduction of a new corrugated shipping container that converts into a self-service display at point of purchase. The shipper is printed in four colors to match the talc containers packed inside. Shipper-display, West Virginia Pulp & Paper's Hinde & Dauch Div., Sandusky, O.

4 New pre-measured convenience for Bisquick is offered by eight one-cup polyethylene pouches in a 26-oz. carton. General Mills is test marketing this no-measure, easy-to-use, time-saving packaging in Buffalo and Denver. Full-page, four-color ads in Sunday supplements and spot commercials are promoting the new packaging in these areas.

4

5 A metal pour spout on a duplex paper bag is a new idea adopted by the Barton Salt Co. for Triple "B" Salt. Designed as a replica of "salt-box" home architecture, the bag is made with a reinforcing paperboard strip between its two plies at the point where the spout is to be inserted. Spout is inserted automatically at the time bags are filled. Bag is made of supercalendered white kraft, with a kraft liner. Bag, Arkell & Smiths, Hudson Falls, N. Y. Pour spout, Seal-Spout, Mountainside, N. J.

5



6

OLD NEW

7

8

9

10

6 A polyethylene "basket" that fits the base of this semi-hourglass-shaped glass bottle for new Lanolin Plus "Color Plus" nail enamel is designed to prevent tipping and to make the package more attractive. Graceful elongated cap-applicator is polystyrene. Basket and cap, Braun-Hobar, Milwaukee. Bottle, W. Braun Co., Chicago.

7 Gourmet items, fast finding their way into supermarkets, require packaging to emphasize quality appeal and to give strong identity to brand and product names. A comparison of old and new packages for Gretchen Grant's ready-to-bake hors d'oeuvre Hot Puffs shows how the new five-color-printed foil wrap achieves this aim with a new package shape and a design that suggests contemporary living. Design, Lane-Bender, New York. Wrap, Milprint, Milwaukee.

8 Shrink-type cellulose bands applied to the neck of bottles of Derby brand barbecue sauce combine merchandising impact for a special-price offer, with complete packaging flexibility. The snug-fitting bands serve as proof of purchase, since they must be returned to the food processor, Glaser, Crandell Co. The promotion can be withdrawn without changing the product's standard package or label. "Cel-O-Seal" band, Du Pont, Wilmington, Del.

9 A hinged-lid set-up box designed and constructed like a youngster's school desk is the new drug-sampler package for Riker Laboratories' Deaner-100, tablets for treatment of school-age children. Four-color lid design illustrates a child's schoolwork as seen from over his shoulder. Box, Stone Container's Acme Div., Chicago.

10 Knomark's Esquire shoe polishes have joined the trend to packaging that provides simplified, non-messy application. Cream-type polish is dispensed from an epoxy-lined metal tube equipped with a screw-on plastic fitment containing a polyurethane foam sponge. A screw cap protects the sponge. Dispensing is through a center hole in the sponge. Round paperboard container holds tube and shining cloth. Tube, Peerless Tube, Bloomfield, N. J. Applicator cap, Plastivac Corp., Williamsport, Pa. Container, Niemand Bros., Elmhurst, N. Y.

Completeness!

Another note on that interesting question: "Why White Cap?"

"Why White Cap?" Perhaps the reason that looms largest in customers' minds is the completeness of the closure assortment, plus completeness in equipment and essential services.

White Cap's position is centered, of course, on caps—on the best-functioning closures, with the widest range of types and sizes. Here, the packer finds the right answer to each vacuum sealing need, no matter what the product, processing method, or type of glass package.

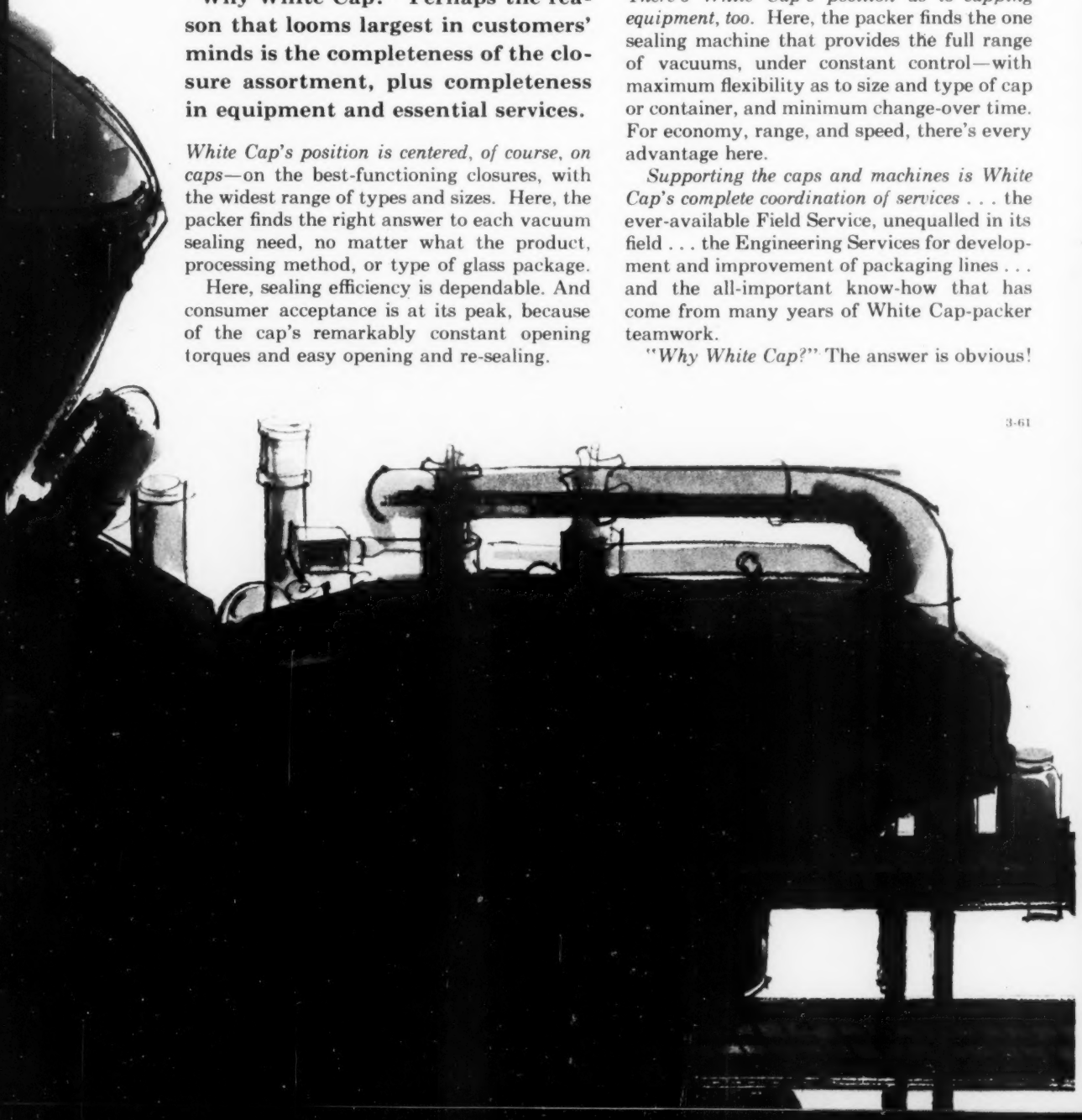
Here, sealing efficiency is dependable. And consumer acceptance is at its peak, because of the cap's remarkably constant opening torques and easy opening and re-sealing.

There's White Cap's position as to capping equipment, too. Here, the packer finds the one sealing machine that provides the full range of vacuums, under constant control—with maximum flexibility as to size and type of cap or container, and minimum change-over time. For economy, range, and speed, there's every advantage here.

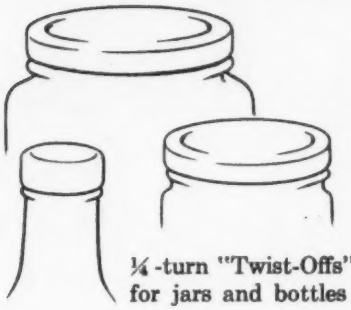
Supporting the caps and machines is White Cap's complete coordination of services . . . the ever-available Field Service, unequalled in its field . . . the Engineering Services for development and improvement of packaging lines . . . and the all-important know-how that has come from many years of White Cap-packer teamwork.

"*Why White Cap?*" The answer is obvious!

3-61



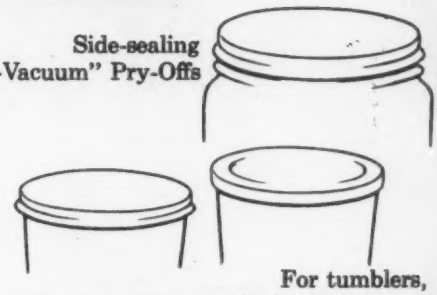
In the White Cap line—ALL THESE!



¼-turn "Twist-Offs" for jars and bottles

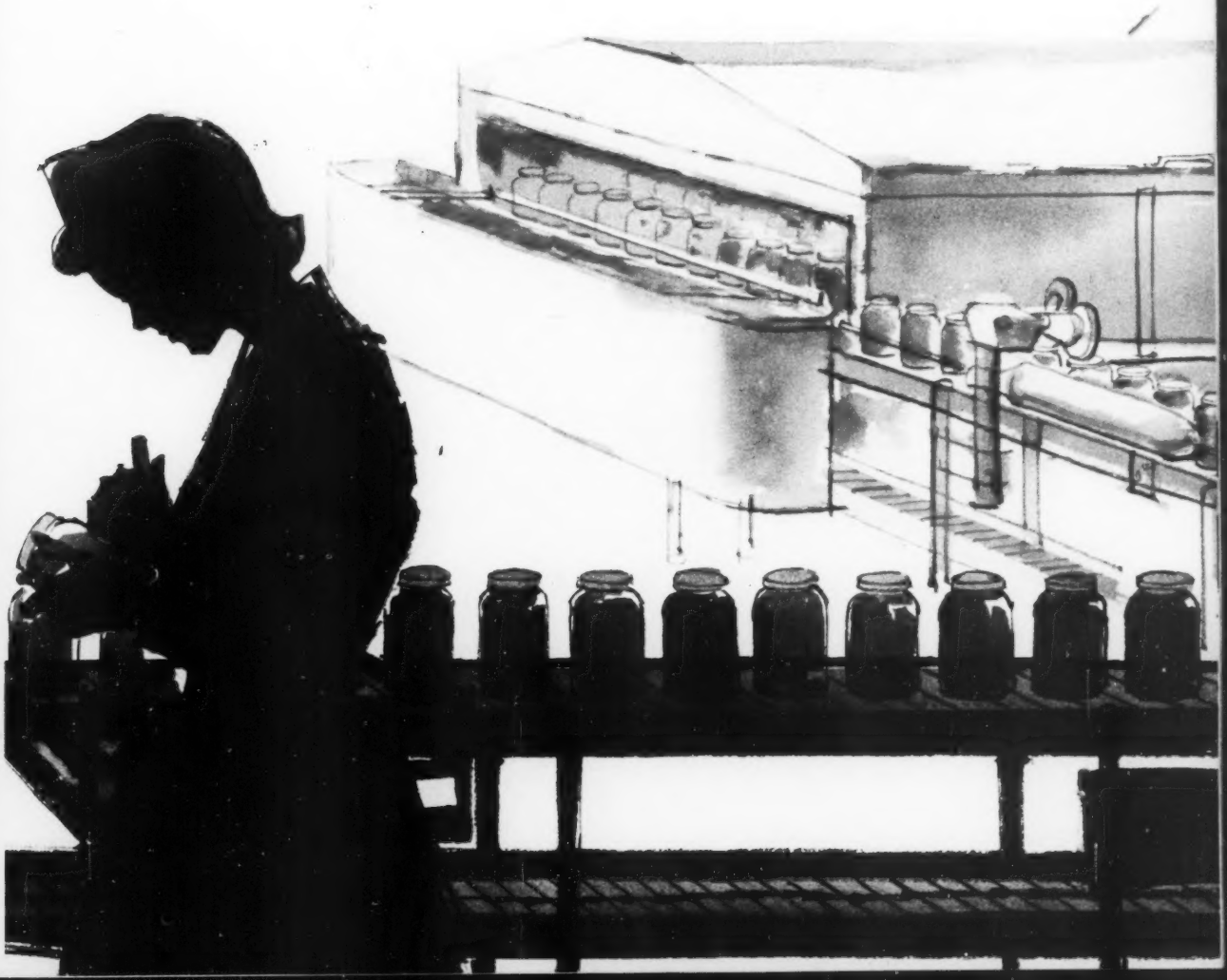
"Twist-Off" and Pry-Off for bottles

Side-sealing "Vapor-Vacuum" Pry-Offs



For tumblers, Snap Re-Seal and Shallow Whitecap

WHITE CAP COMPANY DIVISION OF CONTINENTAL © CAN COMPANY



High-speed stretch-film

PHOTO COURTESY THE MEVINS CO.

A trend to this type of simplified skin package is under way with the development of machines that turn out from 30 to 40 filled, sealed cards per minute

Over-all view *of installation showing Miles Laboratories One-a-Day vitamin packages coming off the line. Vinyl film window-card blanks are inserted on turntable, where they are pre-formed, filled, folded and sealed. Warm air jets (arrow) activate film's "memory" to shrink film to a smooth-tailored fit around product as packages travel by conveyor to take-off.*

Mechanical developments are paving the way for really big-volume use of stretchable-film card packs such as were first adopted two years ago by Northam Warren Corp. for its Cutex Mira-Base.*

This radically new approach to the skin-packaging idea consists simply of a die-cut paperboard folder to which polyvinyl film is secured on the inside surface to provide a window. When a product is to be packaged, the stretchable-film window is pre-formed in an aluminum mold by heat and vacuum. The product is placed in the pockets thus formed, the card is folded over on a center score line and heat sealed to encase the object inside the film. When subjected to a jet of warm air, the tough, clear film, because of its memory characteristic, shrinks to a form fit around the item.

Machines have now been designed to produce such packages at speeds from 30 to 40 per minute, depending on the design of package.

The two machines now in commercial use both operate on the turntable principle and are equipped with loading, pre-forming, folding and heat-sealing stations. The chief difference is that one functions by intermittent motion with the heat coming from below, while the other operates with continuous motion and has the heat source above. Other machines aimed at higher speeds are being developed.

All machines, of course, are designed to produce the same type of package. After the pre-printed cards with their stretchable-film windows are placed in the machines, the film is softened by heat and the pocket or pockets are formed in the film by means of vacuum. After the product is placed in the pockets, the card is automatically folded over so that the product is positioned between card and film. Subsequently, the package is closed by fusing together the two surfaces of film by dielectric sealing. The sealed package is finally subjected to a jet of warm air which shrinks the film to a conforming smooth fit around the product.

At least a dozen firms now market packages made on the new machines, and suppliers of the window

*See "See-Through Card Pack," MODERN PACKAGING, March, 1959, p. 84, and "Caviar Is Pilferproof for Supermarket Selling," MODERN PACKAGING, Aug., 1960, p. 96.

card packs

Design variations *are illustrated by these representative applications on the market. See-through effect is feature of Bexelettes vitamins, Cutex Mira-Base, Pond's Angel Face and Lanolin Plus Complexion Control, all of which will stand by themselves or may be rack hung. Romanoff package shows how construction may be adapted for selling combination of two items. If see-through feature is not important, paperboard back fold may be used like Romanoff and Lip-Ice packages.*

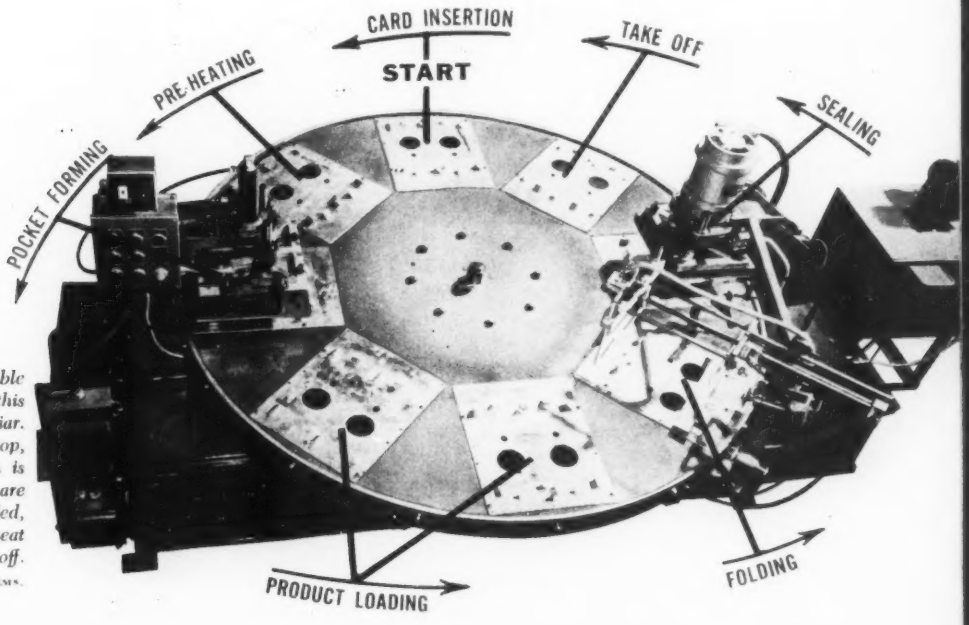
cards and equipment say that dozens more are market testing this trim-looking display package.

Among the cosmetic products already on the market in the new mechanically produced card package using stretchable film—in addition to the first Northam Warren items—are: Tussy Roll-On deodorant; Chesebrough-Pond's Date Case Compact, Angel Touch liquid make-up and Lip Ice; Charles Antell hair spray; Lanolin Plus Complexion Control liquid make-up. In the drug field, this new type of display packaging has been adopted for vitamin products by Lederle Laboratories (Vityke), McKesson & Robbins (Bexelettes), and Miles Laboratories (One-a-Day) and by Dolcin Corp. for Kedrin. Among the initial food products in the machine-made packages are Romanoff Caviar and Squibb's Sweeta, a dietetic sweetener. A stretchable-film card package for Johns-Manville Tile Scriber indicates the wide variety of products that can be adapted to this type of packaging.

Users buy the vinyl-film window-card blanks from three carton suppliers licensed to produce them under patent applications. The packages are being completed on machines operated by the licensees. Machines are also available for in-plant operation. Estimated delivery time for machines is reportedly about eight to 10 weeks.

Most firms, apparently, have preferred to have the packaging done on a custom basis during the market-testing period or until volume warrants in-plant installation of equipment.

The packages already on the market make use of



Sequence *of turntable machine is shown by this set-up for Romanoff Caviar. Counter-clockwise from top, card is inserted, film is pre-heated, pockets are formed, products are loaded, cards are folded and heat sealed, ready for take-off.*

PHOTO COURTESY INPAK SYSTEMS.

the several design variations that are possible with this type of package. There is the see-through type—such as used for McKesson & Robbins Bexelettes vitamins, Cutex Mira-Base and Pond's Angel Face compact—which uses the transparent film in the die-cut window both front and back.

If the see-through feature is not important, a paperboard back fold may be used with the transparent stretchable window covering just the front of the object attached to the card. Examples of this are Romanoff Caviar and Tussy's Roll-On deodorant. The cards may be hung up by a punched hole, or they will stand by themselves if the packaged object has a solid base.

Other variations are suggested, such as a baseball sandwiched between two stretched windows in the fold-over card, one in the back and one in the front, or lipstick enclosed inside a fold-over edge film window. It is also possible to fold in more than one item as illustrated by the combination package for two Romanoff products.

As illustrated by the dozen or more examples already on the market, the opportunities seem to be endless in any number of unrelated product fields.

SUPPLIES AND SERVICES: Inventor of basic stretchable display package, William B. Crane, Jr., 141 E. 44 St., New York 17. Co-owner, The Nevins Co., Clifton, N. J. "Stretch-Pak" trademark owned and licensed by The Nevins Co. Firms authorized to produce "Stretch-Pak" display packages are: The Nevins Co.; Downingtown Paper Box Co., Packaging Div., Downingtown, Pa., and Federal Paper Board Co., Bogota, N. J., all using Goodyear Vitafilm. Machines by The Nevins Co. and Inpak Systems, Inc., 141 E. 44 St., New York 17.

Stretch film in a combination-deal carton

Prince Matchabelli has adopted a completely new idea for a special offer that combines stretch-film window packaging with a folding-carton section, all in a one-piece blank.

This package for a deal offer of Prince Matchabelli Polyderm Moisturing Lotion for Dry Skin includes a free trial-size bottle of the lotion enclosed in the stretch-film window, which is actually an extension of the carton for the regular-sized bottle. Even a die-cut, awning-type flap calling attention to the free trial size is an integral part of the single-piece folding carton blank.

The carton supplier furnishes the stretch-film window blanks with the carton seam pre-glued, but completely knocked down for inserting into the same machines as are used for stretch-film card packs. Following the loading and sealing of the stretch-window section, the carton section is erected and loaded in a normal manner.

The result is a sturdy and trim deal package, printed with pleasing graphic design, that should resist shopwear and discourage pilferage. The cartons are two-color printed in yellow and charcoal gray to match the colors of bottle labeling.

SUPPLIES AND SERVICES: Package by Downingtown Paper Box Co., Packaging Div., Downingtown, Pa., using Inpak Systems machine for "Stretch-Pak." Basic design conception by William B. Crane, Jr., 141 E. 44 St., New York 17. Construction by Graficon, Inc., 141 E. 44th St., New York 17.

One-piece blank *provides for a free trial-size bottle of Prince Matchabelli Polyderm in carton's stretch-film window section.*

Meticulous artwork *features nuclear-reactor kits, here shown being readied for shipment. Revell spends considerable sums for cover artwork to assure authentic illustrations like this one.*

Solutions for the hobby market

Revell found a series of packaging improvements while seeking the answer to pilferage problems; its experience offers guidance to many products similarly marketed

Even the most painstaking advance research before a package is on the market may not reveal the unexpected merchandising problems that will be encountered in retail outlets later.

But certain mistakes and omissions can often be avoided when opportunity is given to observe closely the experience of others. An enlightening example is the series of improvements and economies achieved through package revisions on boxed items made over the last three years by Revell, Inc., Venice, Calif., while an effort was being made to find a solution to a pilferage problem.

This firm manufactures hobby kits to build scale models of such things as nuclear reactors, airplanes, automobiles, rockets, missiles, submarines, locomotives and ships. Reportedly, the company does the biggest business in plastic model kits in the country, claiming 36% more than the combined volume of its next three competitors in an industry that grosses an estimated annual sales volume at retail of approximately $70 million.

Because Revell kits have found a mushrooming market since they were initially introduced in 1950, it is obvious that Revell has done an impressive merchandising job. But until 1958, the company's packaging philosophy was simply: Give the dealer something that looks so good he will display it.

Set-up boxes, colorfully illustrated with the item to be made with the contents, were marketed unsealed in the belief that customers would not pay reasonable prices for kits with sight-unseen contents.

What happened? Too many small and attractive-

looking articles began disappearing from the loosely loaded, easily opened boxes. It was not only exasperating, but expensive to replace all the incomplete sets dealers were returning.

"But if it hadn't been for the pilferers," says one Revell executive, "there are many things about our packaging we might never have learned."

Investigation disclosed that the disappearance of lost articles was not due to inadequate quality control. To discourage light-fingered shoppers, Revell started sealing the packages with strips of pressure-sensitive tape. But this did little to discourage larcenous and non-larcenous shoppers. Customers soon learned it was easy to break the tape seals with fingernails. So the company began overwrapping the kits in cellophane.

The cellophane stopped pilferage all right, but it also reflected a drop in sales. This reconvinced Revell that contents of kits had to be visible.

In a subsequent move, the company packaged the kits in labeled polyethylene bags. This seemed like an excellent idea for a while, since the transparent bags (which actually cost less than the boxes) enabled shoppers to see what they were getting without tempting petty thieves.

Then suddenly Revell (which normally receives about 5,000 "fan letters" weekly) was surprised to learn that a vast number of people valued the artwork on the old boxes nearly as much as their contents. A quote from a letter from one of the "do-it-yourselfers" is typical of the reaction:

"I liked to cut out the pictures on the boxes and frame them for my den."

The pulling power of the pictures was further attested to. Revell says, by the swarm of youngsters who fought for empty boxes after they were used in a display at an annual model-flying event sponsored by the *New York Daily Mirror*.

Nonplussed, but with a new idea inspired by this consumer reaction, Revell's designers went back to work. If picture covers were so important, they would give the best in the company's history. New package specifications called for full-color illustrations on art-texture paper and art layouts which would facilitate re-use of the pictures for framing.

The company began spending as much as $2,000 each for the box-cover artwork to increase appeal to actual and potential collectors.

To take full advantage of the new design concept the artwork is reproduced without surprinting on stippled paper to create a simulated oil illustration. The suggestion to frame the picture is on the package. The first two series, one of ships and one of planes, merchandised in this concept were titled "Picture Fleet Series" and "Picture Plane Series."

A program was launched to promote the package as well as the product. Eight of the original paintings were presented in a nationally publicized event to the U. S. Naval Academy at Annapolis for permanent exhibit. Revell retailers were advised to hold contests on the best framing of the package pictures. The excellent immediate as well as continuing sales reaction convinced the company of the astute thinking behind the new packaging concept.

To frustrate pilferers, Revell sealed all model components and instructions in unprinted polyethylene bags prior to insertion in the new boxes.

The response to this has been overwhelming. Dealers are displaying the kits more prominently than ever. And in addition to such established outlets as hobby, drug, department, toy and variety stores, Revell is receiving substantial orders for the kits from such unusual new distribution sources as supermarkets, autowash establishments, butcher shops and lumber yards.

Despite the elaborateness of the upgraded packages, Revell estimates that their kits are selling for no higher and, in some instances, for less than the retail price that might now be charged for kits in previously used packages, for the following reasons:

- Pilferage has been reduced to a point where it is

SEQUENCE

1 **Unsealed boxes** *with loose-packed contents were marketed first in the belief that shoppers would not buy without seeing what's inside. When pilferage problem arose, Revell secured boxes with tape, but found it was easy for customers to break the tape with fingernails. Cellophane overwraps were tried next, but they slowed down sales. This convinced company that few will buy model kits without seeing contents.*

no longer regarded by the comany as a significant manufacturing cost factor.

- Increased volume created by greater demand has lowered over-all production costs, despite higher prices for materials and labor.
- Freight charges have been reduced materially by making bulk shipments of the kits in lightweight polyethylene bags from Revell plants in California and New Jersey and boxing the bagged kits at their destination in each instance.

To minimize the cost of polyethylene bagging, Revell has installed economical mechanical heat-sealing equipment in its plants.

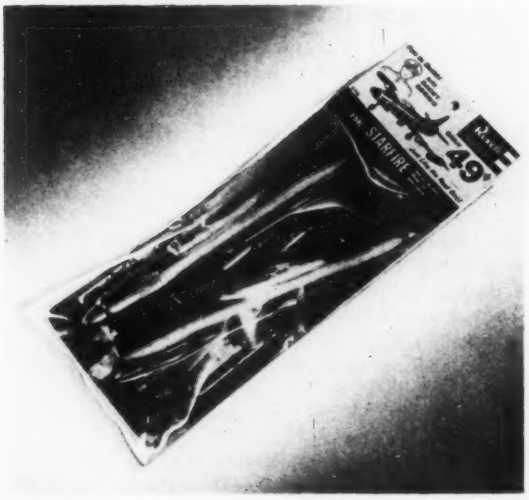
While present packages are highly satisfactory, Revell's experience of the last few years has made the company keenly aware of the market potentials of improved packaging and the firm is already contemplating several more innovations.

One involves a perforation on the bottom of the box to permit the mounting of boxes on unused wall areas in retail outlets where display space is so limited that most packages must be stacked flat on shelves where only box edges are visible to shoppers.

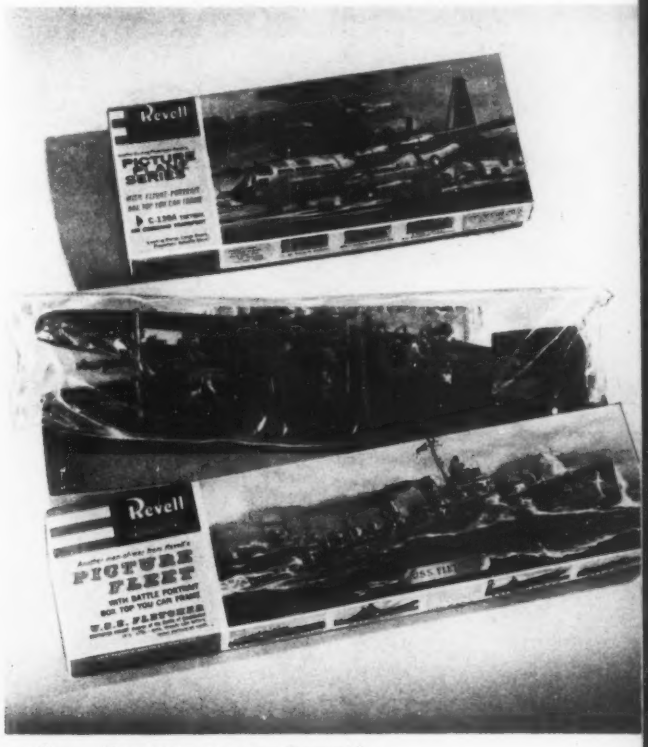
Revell's advertising manager, Dolly Reed, believes the company has evolved a philosophy that should be most useful to others in future package developments. "Our packages," she says, "must be completely integrated with our products and the psychological needs of our customers. We realized long ago that if we sold fully assembled models, we were merely selling toys with limited appeal even among children. By selling kits for assembly, we are appealing to a universal do-it-yourself urge to make something. Our objective, therefore, must be to offer the customer a product with which he can make a model ship or plane that he is proud of, in a package which will inspire him to do it."

SUPPLIES AND SERVICES: Set-up boxes by Bell Box Co., Nazareth, Pa.; Cardinal Paper Box Co., 410 Frelinghuysen Ave., Newark, N. J., and Advance Paper Box Co., 1900 W. 62 St., Los Angeles 47. Heat sealers by Bag-O-Matic Packaging Equipment Co., 8350 Santa Monica Blvd., Los Angeles 47.

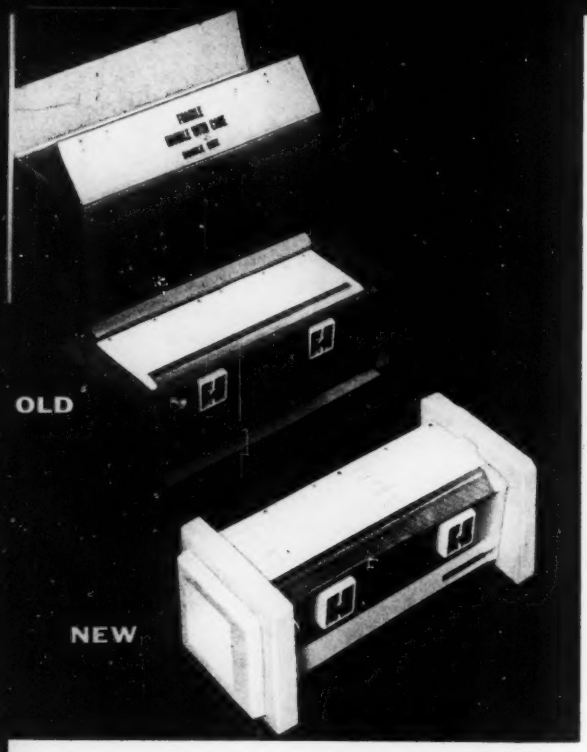
OF REVISIONS



2 **Polyethylene bags** *with printed header labels, adopted in a subsequent move, enabled shoppers to see what they were getting without tempting the light fingered. They are still widely used for Revell's popular-priced items, but fan mail from hobbyists reveal a surprising thing: Customers missed the colorful cover pictures, which they liked to frame.*



3 **'Box tops you can frame'** *has become the latest idea in package appeal. The former pilferage problem has been eliminated by sealing all of the model parts and the instruction sheet together in a polyethylene bag which goes inside the boxes. And this upgraded packaging actually saves money, according to Revell officials.*



Featherweight foam saves 30%

Foamed plastics, which combine low cost with such other attractive characteristics as fabrication versatility, ultralight shipping weight and superior protection, may well be the packaging sensation of this decade. Puritron Corp., New Haven, has reaped the benefit of all these properties plus one more—ease of product inspection—in the application of prefabricated foamed polystyrene end caps as in-carton cushioning for a line of room air filters.

Since adopting the molded end caps to replace a die-cut wrap-around sheet of corrugated board, Puritron reports a 30% cut in packaging-material costs, a 30% reduction in packaging time and a 10% saving in shipping weight. In addition, says the company, in-transit damage has been all but eliminated by the featherweight plastic caps, which suspend the delicate instrument in the shipping carton to protect it from shock on all six sides. The corrugated shipper has remained unchanged in this packaging transition.

There's a convenience bonus, too. The end caps make it easy for the retailer to remove the product for customer inspection. *End caps by Holyoke Custom Moulded Products, Inc., Holyoke, Mass., using Koppers' expandable polystyrene.*

COST CUTTERS

Two-stage switch-over cuts costs and builds shirt sales

A record of steadily increasing sales and steadily decreasing costs is reported by Colonial Corp. of America since (1) switching from cellophane wraps to prefabricated polyethylene bags for packaging shirts and (2) replacing a manual bagging operation with semi-automatic wrapping machinery that uses roll-stock film. According to the company, the first of these moves slashed material costs by nearly 33% while the second halved the cost of labor and quadrupled packaging speeds. Sales have nearly tripled since the swing to polyethylene and have risen some 20% in the last year alone, the company says.

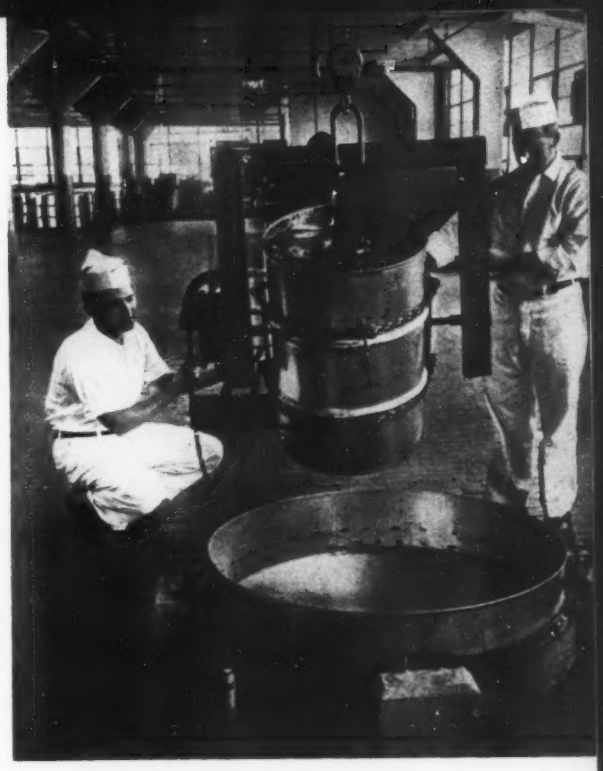
Requiring the services of only one operator, the machine applies a film wrap around each shirt, sealing it completely except for two skip-seal openings on the bottom that allow shoppers to feel the fabric without destroying the package. Seven of the machines are now in operation at Colonial's five plants, packaging more than 50% of the firm's output in polyethylene. The company plans to convert its entire production to this packaging system. *See-Safe wrapping machines by Sydney-Thomas Corp., 2057 Reading Rd., Cincinnati, using film extruded from U.S.I.'s Petrothene resin.*

Economy in bulk

When Heublein, Inc., hit upon a more efficient method of shipping and handling bulk quantities of food concentrates, it set in motion a "chain reaction" that has resulted in an impressive list of production and packaging economies.

A principal ingredient of this Hartford-based packager's A-1 steak sauce is tomato paste. Formerly, the company ordered the product from California suppliers in carload lots of No. 10 cans. In a bid to cut shipping costs, Heublein switched from cans to 55-gal. tinplated steel drums. The result: savings in freight charges of up to $83 per carload.

But that was just the beginning. The use of drums has greatly improved in-plant labor efficiency, says Heublein. Opening of containers has been reduced from a tedious chore to a swift one-man operation. In addition, only two men (with the help of an electric chain hoist) are needed to keep mixing tanks constantly supplied. Product waste, formerly caused by tomato paste clinging to the discarded tops of cans, has been eliminated. Finally, the empty drums are sold, in contrast to the former practice, in which Heublein had to pay for can removal. *Sterilpac shipping drum by Rheem Mfg. Co., Container Div., Linden, N.J.*



Streamlined shipper-and-label inventory nets 12% saving

In a model of thoughtful planning well worth the attention of any company whose packaging program has grown unwieldly through product additions, Henry Vogt Machine Co., Louisville, has streamlined its shipping-carton and label inventory to achieve new customer satisfaction and a 12% cut in packaging costs. Two years ago, this maker of forged-steel pipe fittings decided it was high time to revamp its packaging line-up. There were shipping cartons of many sizes and shapes. A mountainous and wasteful inventory of pre-printed labels covered every type, size, service pressure and number of pieces that might be required for a shipment.

Vogt reduced carton inventory after a study of sales data to determine the sizes and pressures of items most commonly ordered and by limiting shipper weight to what one man can carry. All new carton dimensions are in multiples of 3 in., which facilitates handling and permits stacking in less space. The label-inventory problem has been solved by adopting a skeleton label containing only the Vogt logo. A label-printing machine imprints pertinent data as needed, plus a simple product illustration. *Labels and label printer by The Monarch Marking System Co., Dayton 3.*

Carton cleaner

Ingeniously adapted to Lactona's toothbrush-packaging line, a compact industrial dust collector solves a pesky problem of quality control at low cost

To users of die-cut cartons or trays, particularly those offering product visibility, the small amounts of paper chaff and dust which sometimes appear in the container as a result of the die-cutting operation represent a bothersome problem in quality control — and one that can lead to consumer rejection of a product and lost sales.

Lactona, Inc., a St. Paul packager of personal brushes, has reached out of the packaging field for an industrial dust-collecting machine that solves the problem at low cost and with high efficiency. Adapted for integration with the company's packaging line, the automatic attachment features two simple but ingenious modifications that guarantee complete clean-up. The application is worth examination by many packagers whose products must give the consumer positive assurance of cleanliness.

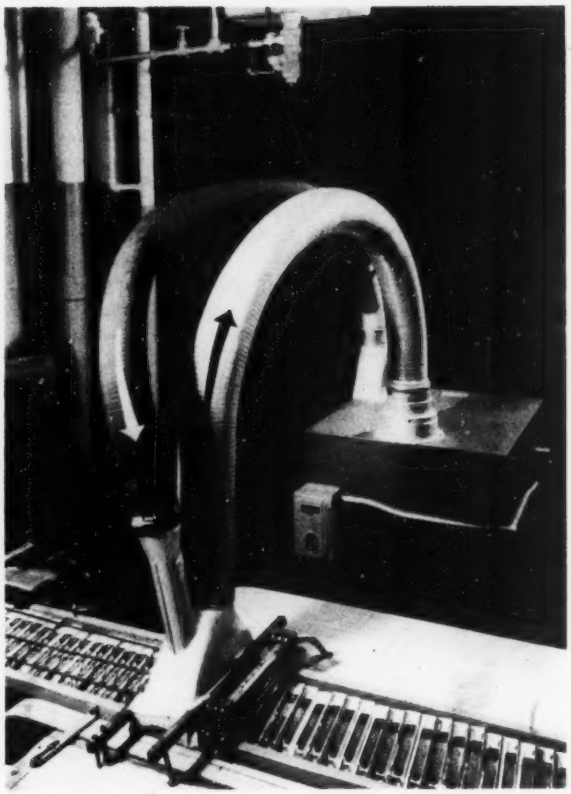
One of the chief products manufactured and marketed by the Lactona firm (82 employees) is a high-quality toothbrush packaged in an open-faced, cellophane-overwrapped carton. Because of stiff competition in this product field and because of the prestige image which the company has built for its brand, maintenance of package appearance ranks high in Lactona's marketing program. That's why the "harmless" nuisance of paper cuttings in the carton has long been rated as a top-priority problem.

Working with supplier-company engineers, the packager last year came up with a vacuum-action cloth-filter dust collector. The unit's cabinet is connected by a short length of flexible vacuum hose to a hood anchored snugly over the packaging line. As the toothbrushes in their open cartons travel by conveyor under the hood, the vacuum hose sucks up dust and chaff, and carries it to the collector cabinet. The cleaned cartons then continue their journey to the cellophane-overwrapping station.

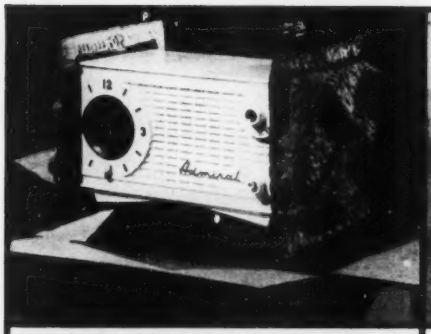
Two simple modifications have been developed to increase the efficiency of this dust collector. A static bar mounted just ahead of the dust hood on the packaging line neutralizes static electricity in the brushes' plastic handles, which would otherwise resist the cleaning action of the vacuum hose. The other modification is a blower hose which makes use of filtered air in the collector cabinet to agitate the brushes in their cartons and further loosen adhering particles of waste material. The hose runs from the cabinet's exhaust outlet to the dust hood, carrying a predetermined supply of clean air.

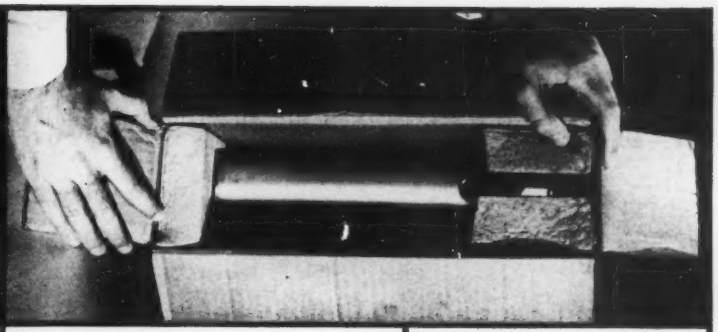
Lactona reports that the complete attachment costs less than $300 to install and requires no maintenance other than semi-automatic cleaning of filters and daily emptying of the dust tray. The attachment operates without slowdown of packaging-line speed, which averages 40,000 cartons per day.

SUPPLIES AND SERVICES: Dust-collector attachment by Torit Mfg. Co., 1133 Rankin St., St. Paul 16.



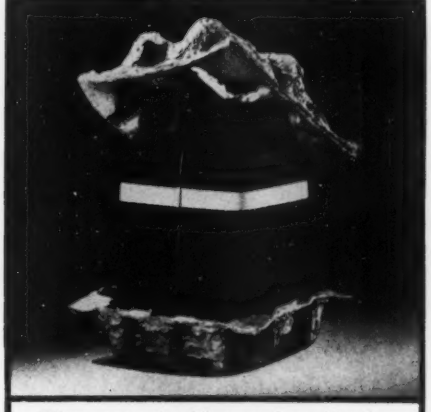
Swift removal *of paper dust and chaff from Lactona toothbrush cartons is performed by this dust collector. As vacuum hose (right) carries waste back to collector cabinet, clean air from blower hose (left) stirs up hidden particles. Arrows indicate direction of air flow. Static bar mounted on the conveyor ahead of the dust hood loosens clinging dust from brush handles.*





Radio manufacturers report package savings up to 9 cents per unit on table models, and labor savings up to 3 cents per unit, after switching to Tekmold.

Three custom-molded Tekmold caps reduce costly interior assembly in packaging this fire extinguisher. Only four movements are needed to put the unit in the outer container.



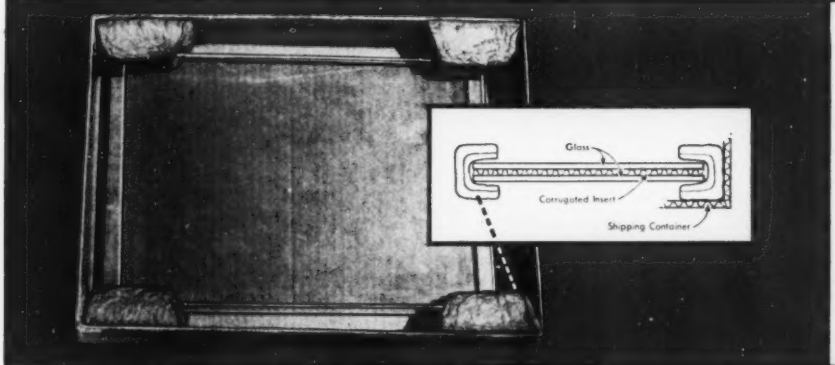
what a variety of shapes and sizes . . .

yet they all pack safely and economically in

TEKMOLD®

protective packaging

The more valuable or vulnerable the product, the more necessary to give it Tekmold protection. This projector travels safely because of Tekmold.



Positive protection is given to fragile or sensitive products like this *p*H electrode. The rigid, form-fitting, molded Tekmold packaging "suspends" the contents... cushions against shock from any direction.

This photo and diagram shows how flat sheets, such as glass, may be safely and economically "floated." Tekmold packaging is tailored to your job... ready to use.

Bemis Tekmold, the custom-molded protective packaging, costs you less than conventional methods because it replaces multiple-piece, die-cut and scored corrugated assemblies . . . and also minimizes packing labor —there's no slow hand-folding and assembling.

Tekmold is *adaptable*. It may be the real answer to your problem. For the *complete* Tekmold story, write, wire or phone us today.

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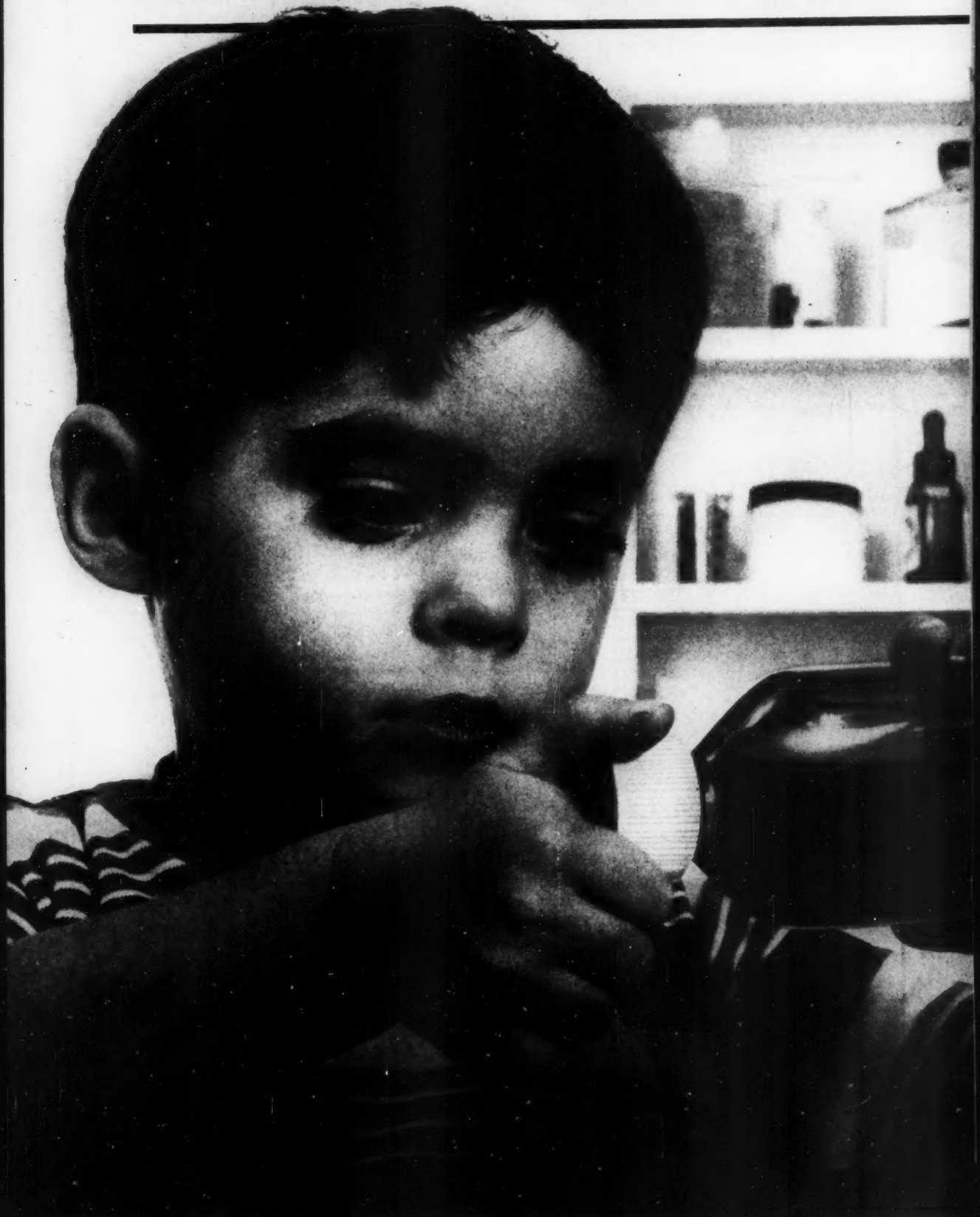
WHERE FLEXIBLE PACKAGING IDEAS ARE BORN

CURIOUS...BUT SAFE



thanks to this new two-plastic bottle cap

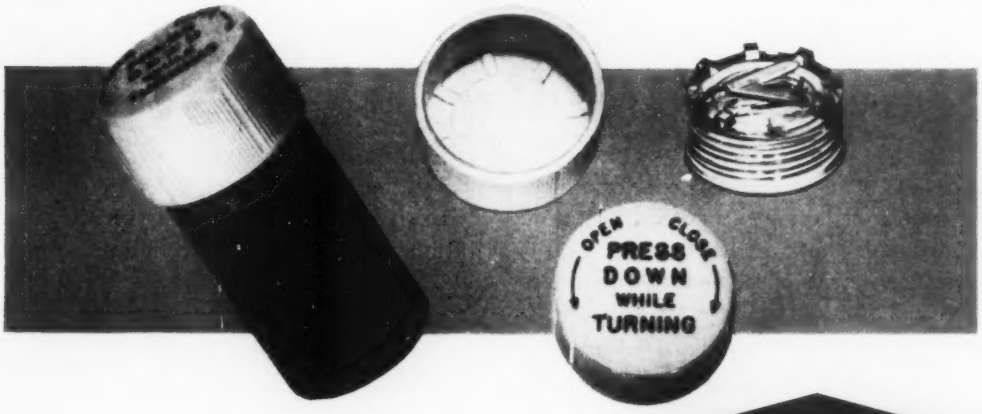
Hundreds of children are poisoned every year by medicines they take accidentally. Now, a leading bottle manufacturer announces "the first major improvement in prescription packages in fifty years"—a new plastic safety cap that cannot be opened by 97% of preschool children tested.

Manufactured for the Brockway Glass Company, Brockway, Pa., by Seals, Inc.,* the safety cap consists of a high-density polyethylene outer shell and an inner cap made of C-11, a styrene copolymer developed by Union Carbide Plastics Company. Fitted together, the combination looks like a conventional bottle cap. But it must be pressed down and turned to open, operations that can rarely be performed simultaneously by a young child.

This new cap made of two BAKELITE Brand plastics is another example of the importance of these materials to improved packaging. Ability to adapt to new forms and functions, durability, and handsome appearance, are all properties that make these materials useful in a field where new ideas play so important a role.

An unusual closure like this depends largely on having a selection of the right plastics to work with. Union Carbide Plastics Company has the largest variety of plastics for packaging available. Each is engineered for a specific use. Each is capable of complementing other plastics in more complex package design. Find out how this can mean production savings and improved product performance for you. Write Dept. KF-86C, Union Carbide Plastics Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. *In Canada:* Union Carbide Canada Limited, Toronto 12.

*U. S. Patent No. 2964207



Lugs on inner cap **(right)** engage those inside the outer cap **(left)** when pressure is applied, permitting the whole cap to be unscrewed. Otherwise, the two leaf springs molded to the inner cap keep lugs from engaging, and the cap turns without opening.

UNION CARBIDE

BAKELITE and UNION CARBIDE are registered trade marks of Union Carbide Corporation.

NOW! A HEAVY GAUGE, POLYMER COATED FILM WITH 12.6% GREATER YIELD!

AVISCO® 600RS CELLOPHANE

Here is a 600 gauge, premium performance, polymer coated cellophane that *costs no more* than comparable films—yet it gives *12.6% greater yield*. What's more, new 600RS offers extra strength that virtually ends bag breakage—true transparency and sparkle that provide maximum appetite appeal—freshness and flavor retention that increase shelf life. Equally as important, 600RS prints with jewel-like quality. And it sails through bagging machines in a breeze—seals quickly and securely over a wide temperature range. Don't settle for less than this *overall economy* in your bagging operation. Phone or write us for an appointment with our representative or a selected cellophane converter specializing in your field.

Write for our new folder—"Avisco 600RS cellophane."

AMERICAN VISCOSE CORPORATION, FILM DIVISION, 1617 PENNSYLVANIA BOULEVARD, PHILADELPHIA 3, PENNSYLVANIA. SALES OFFICES ALSO LOCATED IN ATLANTA, BOSTON, CHICAGO, DALLAS, LOS ANGELES AND NEW YORK.

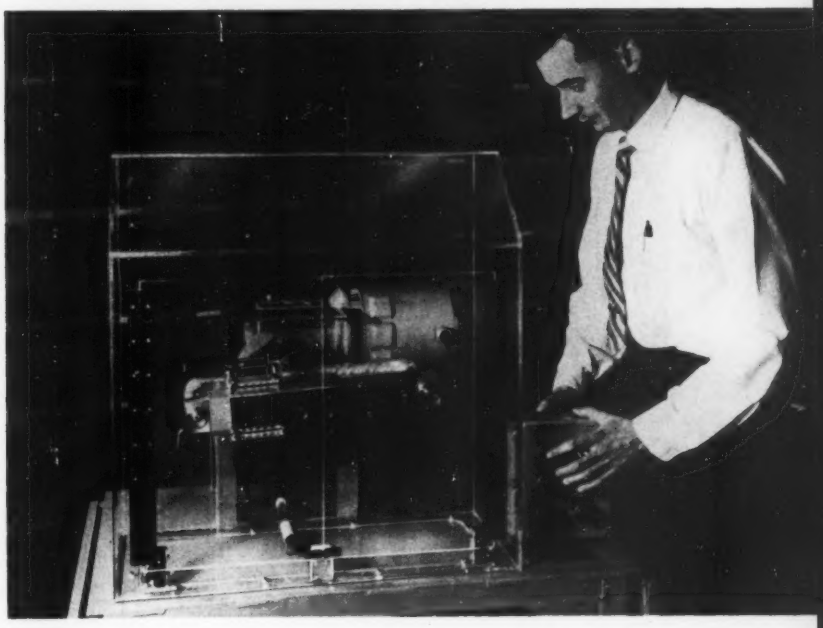


Figure 1. *Du Pont stress-flex tester, housed in plastic case as a safety measure, has motor (rear) which turns testing assembly in rotary motion, subjecting clamped film samples to dual destructive forces.*

A new stress-flex tester

It permits laboratory prediction of the commercial durability of flexible materials; a mechanical action simulates the physical stresses that can lead to package failure.

*By Herbert C. Horst and Robert E. Martin**

The manufacturer of flexible films for use in the packaging industry is vitally concerned with the performance of his products in commercial use. Because of his need to control product quality and to obtain research direction on new and improved products, it is essential that he have laboratory tests that will enable him to predict the commercial performance of packaging materials.

*Both authors are in the Market Development and Customer Service Section, Film Dept., E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

There are many properties that must be considered in assessing the suitability of a packaging material for a specific application. One important property is durability.

This article undertakes to describe a laboratory test that helps to predict the commercial durability performance of flexible packaging films.

A great deal of work has been done in attempting to correlate the results of standard physical test procedures with actual commercial durability ex-

Figure 2. *Film samples are inserted between fixed (left) and movable (right) jaws of testing assembly. Jaws are then positioned seven-eighths of an inch apart prior to start of test.*

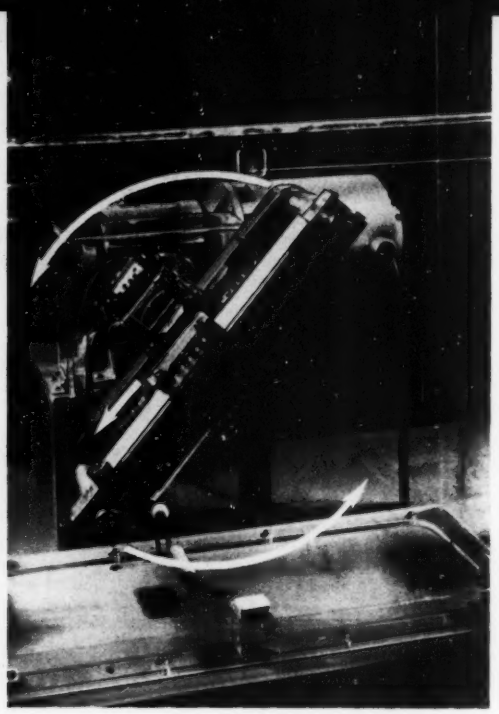


Figure 3. *As assembly rotates, force of gravity slides movable jaw along its arm. This motion applies flexing and pulling forces simultaneously. Results correlate well with performance in actual packages.*

perience. V. L. Simril and D. W. Flierl (1)[1] have discussed the correlation of laboratory data from a variety of physical tests with the results of product shipping tests. They concluded that judicious evaluation of such tests as impact, tear and pinhole flex makes it possible to rate films in the order of their relative resistance to package failure. However, the interpretation of data obtained from these tests and its extrapolation for use in predicting trade performance require considerable experience and judgment. The necessary investment required for the purchase of test equipment is also a prohibitive factor for most flexible-film users.

There has, therefore, long been a need in the packaging industry for a single test which would predict in the laboratory the commercial package-durability performance of a flexible packaging film.

This need was dramatically demonstrated several years ago when an experimental cellophane unexpectedly exhibited poor durability characteristics in the initial stages of commercial testing. This was particularly disconcerting, since extensive and exhaustive testing by all then-known standard physical test procedures had predicted more than adequate durability performance. A program was launched to determine what measurable film characteristics might have predicted this deficiency in the laboratory. The observation of a field representative that this film performed poorly in a "hand-flex" test[2] proved to be the best lead to pursue.

Follow-up resulted in the design of a device that mechanically reproduced the action of the hand-flex test. The resulting instrument has been designated the "stress-flex tester," a term which aptly describes the two principal types of physical abuse which it is designed to impose on the film.

Description

The Du Pont stress-flex tester utilizes two rubber-covered jaws which grip a 4-by-7-in. film sample in approximately the same manner as the hands. One pair of jaws is fixed to a framework, while the other pair is free to slide parallel to the 7-in. film dimension. As the framework is rotated, the movable pair falls until restrained by the film. The film is thus subjected to a flexing action and a reproducible stress at the end of each stroke. The number of strokes necessary to produce failure or tear in the sample is reported as the stress-flex value.

The stress-flex tester, as originally conceived, was designed for use at room conditions. However, since breakage is more frequent during winter months, it seemed logical to alter the test so that it might be conducted at low temperatures. Low-temperature

[1]Numbers in parentheses identify References appended.

[2]The "hand-flex" test is conducted by tightly gripping a film sample in both hands, with the thumbs parallel and about 3 to 4 in. apart. The hands are then moved together until they are approximately ½ to 1 in. apart. A straight-line reciprocating motion of the hands parallel to the thumbs alternately stresses and flexes the film.

Table I: Effect of impact energy* on stress-flex values
1.5-lb. moving jaw, 300 MSD cellophane

	High-impact energy jaw (3 deg. slide angle)	*Low-impact energy jaw (17-deg. slide angle)*
Stress-flex value	7.4	24.8

*Altered by changing friction resistance.

Table II: Comparison of stress-flex and commercial field tests
300 MSD cellophane

Film	*Low-temperature stress-flex value**	*Commercial field-test packages surviving*** 8-oz. peanut logs	1 lb. jelly eggs	6 oz. pretzels	8 oz. cookies
Film "A"	55	69%	81%	79%	54%
Film "B"	17	50%	40%	44%	41%

*Test conducted at 32 deg. F., film conditioned at 35% R.H., 880 samples per film type.
**Duplex bags used in all cases.

testing, in addition to providing test conditions that are more realistic commercially, has also proved to correlate better with the results obtained in commercial package-durability tests.

The Du Pont stress-flex tester, modified for low-temperature testing, consists of a test assembly supported on the shaft of a ¼-h.p., 35-r.p.m. ratiomotor. The sliding film clamp assembly is supported by eight stainless-steel sealed bearings on a solid slide bar. A flexible-strip heater is mounted on the outside face of the slide bar and is set to control at 35 deg. F. This provides sufficient heat to prevent the formation of frost on the bearing surfaces. The slide bar supporting the movable jaw is mounted on bearing blocks that permit locating the jaw faces 2½ in. apart when loading a film sample. The jaws of the instrument are then closed to a separation of ⅞ in. before starting the test. These distances are critical factors.

Although the tester pictured (Figures 1-3) is intended for use in controlled cold rooms, it may be mounted in a suitable refrigerated box. When it is mounted in a cold box, adequate visual and physical access must be provided so that samples can be easily and properly loaded.

Theory

The stresses generated in the stress-flex test are extremely complex and defy precise definition. Because of the mechanical complexity of the distribution of stresses in this test, a multiplicity of film properties is simultaneously grouped and measured in one empirical procedure. Excellent correlation of the stress-flex test and package-durability results indicates that similar multiple and complex causes of failure are probably involved in both cases.

Basically, however, the failure of a film sample in the stress-flex test is related to (1) the forces required to pull the film apart under sudden load and (2) initiation and development of pinholes in the film due to fatigue at a point of flexure.

On the initial drop of the moving jaws, a line of force is theoretically developed between the extreme edges of the two diagonally opposite corners. With each drop, the film elongates diagonally and the region to which stress is applied on the sample is thereby increased along the edge of the jaw with each elongation. Flexural degradation occurs as the moving jaw passes the fixed jaw, where there is practically no restraint of the moving jaw by the film sample that is being tested.

Factors affecting results

The impact energy of the movable jaw of constant mass is directly related to the velocity of the jaw at the point of impact. The velocity is a function of (a) the allowable falling distance of the jaw, (b) the sliding friction of the jaw on the slide bar and (c) the speed of rotation of the instrument.

Logically then, stress-flex values should be inversely proportional to the impact energy of the moving jaw. The width of the sample is the easiest variable to alter for determining the effect of impact energy on stress-flex values, since it controls the allowable distance of fall for the moving jaw. Theoretically, an inverse relationship should be obtained between the sample width and the stress-flex values. Figure 4 graphically illustrates this experimental relationship.

In a similar way, the ratio of slack film between the jaws to the amount of jaw space (film-space

Figure 4
Sample width vs. stress flex
300 MSD cellophane

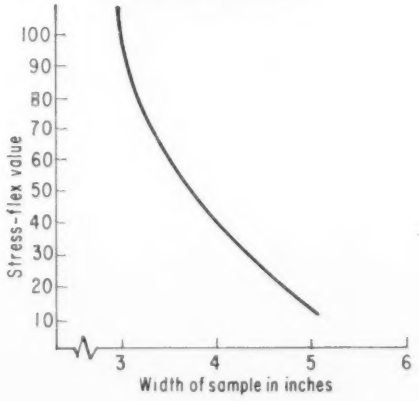
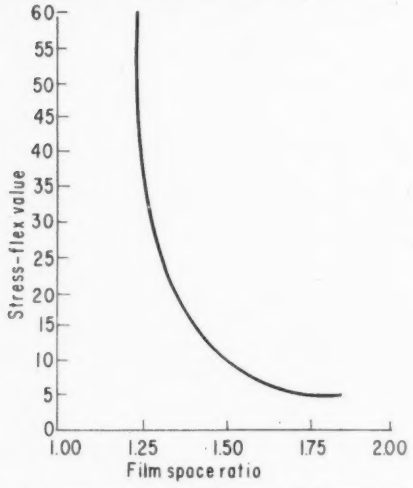


Figure 5
Stress flex vs. film space ratio*
300 MSD cellophane, 4¼-in. jaw space



*Film space ratio = ratio of the amount of film between the jaws to the amount of jaw space.

ratio) should affect stress-flex values. As Figure 5 indicates, stress-flex values increase rapidly as the film-space ratio is decreased. This indicates that a slight error in cutting samples or placing them in the jaws can significantly effect stress-flex values.

The sliding friction of the moving jaw on the bearing bar will markedly affect stress-flex results by altering the impact energy in the same manner as the width of the sample. This was experimentally verified in a stress-flex comparison on the same film, using sliding jaws of the same weight. One jaw, however, had a static, free-slide angle (as measured from horizontal) of 17 deg., while the other had a 3-deg. slide angle. The jaw with the 3-deg. slide angle (higher impact energy) gave values one-third as great as the other jaw. (See Table I.) Extreme care, therefore, is taken to see that the test equipment is properly maintained to insure that frictional resistance is constant.

A large number of flexible packaging materials have been subjected to the stress-flex test. The results in general are that "Mylar" polyester film, polyethylene and the vinyls are ranked high in resistance to stress-flex value; cellophane and saran films, intermediate; and kraft papers, acetates, aluminum foil and waxed papers, low. However, because of the failure characteristics unique to each of the various flexible packaging materials, meaningful comparisons of stress-flex values of one type of film with those of another are not possible.

Sample preparation

In the characterization of a hydrophilic film such as cellophane, it is essential that the moisture content of all test samples [*Continued on page 170*]

Table III: Comparison of stress-flex and laboratory bag drop tests
300 MSD cellophane

Film	*Low-temperature stress-flex value**	*Bag drop tests packages surviving***
Film "A"	43	87%
Film "B"	25	65%

*Tests conducted at 32 deg. F., film conditioned at 35% R.H., 160 samples per film type.
**Duplex bags used in all cases.

Table IV: Comparison of stress-flex and laboratory bag drop tests
450 MSD cellophane

Film	*Low-temperature stress-flex value**	*Bag drop tests packages surviving***
Film "A"	68	72%
Film "B"	26	38%

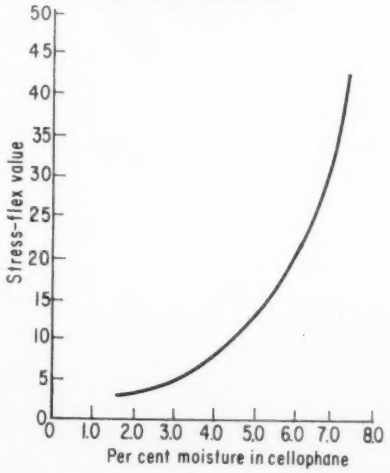
*Tests conducted at 32 deg. F., film conditioned at 35% R.H., 160 samples per film type.
**Single-wall bags used in all cases.

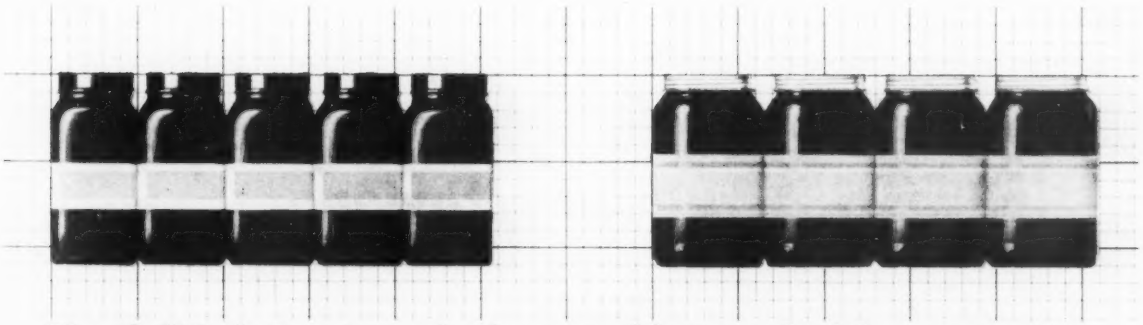
Table V: Comparison of stress-flex and laboratory bag drop tests
300 MSD cellophane

Film	*Low-temperature stress-flex value**	*Bag drop tests packages surviving***
Film "A"	62	79%
Film "B"	53	72%
Film "C"	38	68%
Film "D"	22	61%

*Tests conducted at 32 deg. F., film conditioned at 35% R.H., 160 samples per film type.
**Duplex bags used in all cases.

Figure 6
Stress flex vs. moisture content
300 MSD cellophane





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By Orville J. Sweeting and Joseph J. Levitzky†*

Polymer-coated polyethylene

Two-side-coated film, now available for test purposes, shows ability to handle more-exacting protective jobs, with improved clarity, sealability and machine-handling characteristics

The ever-increasing application and use of polyethylene films in packaging is one of the outstanding developments in this field in recent years. Despite the wealth of properties which make polyethylene film a preferred material for the wrapping of goods of a great variety, from dry-cleaned garments to fruits and vegetables, polyethylene is deficient in some properties that prevent its wider use (1)[1]. These properties are principally its lack of resistance to the passage of oils, greases, gases and flavors. Furthermore, dust and dirt become ingrained in the soft surface, giving the package an unattractive, shopworn appearance. To a less extent, the lack of high transparency and surface gloss of commercial polyethylene films has been a handicap.

The Research & Development Laboratories of the Film Division of the Olin Mathieson Chemical Corp. have had projects under development for several years whose goal was to provide a coated polyethylene with properties much improved over the uncoated film, without impairing the desirable durability and water-vapor resistance of uncoated polyethylene. This result has now been achieved. The coated film has superior properties of flavor resistance, high grease and oil resistance, low gas permeability and high abrasion resistance. In addition, the surface gloss and transparency of polyethylene have been improved. The new polymer-coated polyethylene readily accepts printing inks of the type used to print OX-511 cellophane (2).

The new film performs well on packaging machines designed for polyethylene. The economic pressure to use polyethylene as an overwrap is forcing equipment manufacturers to redesign cellophane- and paper-wrapping machines so that they will handle polyethylene (3) and it is therefore expected that this market will expand enormously.

Olin coated polyethylene is now in pilot-plant

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[1] Numbers in parentheses identify References appended.

Figure 1. *Demonstration shows improved transparency of new polymer-coated polyethylene (right) as compared with conventional uncoated polyethylene (left). Both of the samples shown are 1.5 mils.*

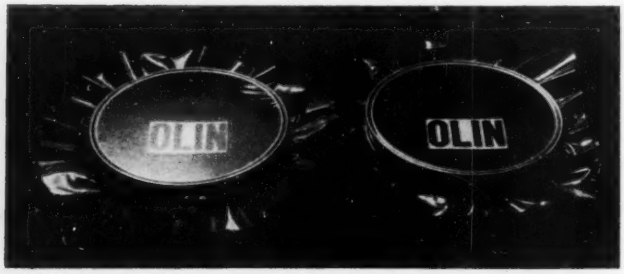


Table I: Summary of properties of coated polyethylene

	Coated polyethylene	*Polyethylene*
Gauge, mils	1.7	1.5
Yield, in.²/lb.	17,500	20,000
Clarity	Excellent transparency	Some haze; dull surface
Water-vapor permeability	Low	Low
Gas permeability	Very low	High
Odor permeability	Low	High
Grease permeability	Low	High
Heat-seal strength	High	High
Machine performance		
Printability	Excellent; like OX-511, without treatment	Excellent when treated
Adhesive sealing	Easy to seal	Difficult to seal
Operability	Excellent on machines designed for polyethylene	Special machines required

production in development quantities and for some period of time to come will be available to the packaging industry in limited quantities only.

Properties

Several of the more important functional properties of Olin's polymer-coated polyethylene film are summarized in Table I.

Water-vapor and gas permeability. One of the desirable features of polyethylene is its excellent resistance to the transmission of water vapor, which makes it a good protective material for both dry and moist foods. This low permeability of polyethylene is complemented by the addition of a protective polymer coating. On the other hand, the chief disadvantage of polyethylene which precludes its use as an effective gas barrier is its extremely high gas permeability (4). The application of a coating has lowered the permeability of polyethylene to air, oxygen and other common gases to approximately 5% of the value found with uncoated film. Gas and moisture permeability data appear in Table II.

Grease and odor resistance. Certain foods require a packaging film which resists attack by fats, greases and oils. The poor oil resistance of ordinary polyethylene film has been overcome by the polymer coating. Laboratory and field tests show that two-side-coated polyethylene, when placed in contact with such materials as cottonseed and mineral oils, proves to have outstanding properties in resistance against oil penetration. Some comparative data on oil resistance are shown in Table III.

Table II: Moisture and gas permeability of coated polyethylene

	Polyethylene 1.5 mils	*Coated polyethylene 1.7 mils*
Water-vapor permeability (g./m.²/24 hrs.)	11.6	8.0
Gas permeability (ml./m.²/24 hrs./atm.)		
Air	1,400	40*
Oxygen	6,000	150

*Recent work still in progress has shown that formulation changes may be capable of reducing the air permeability to less than 10 ml./m.²/24 hrs./atm.

Table III: Oil resistance of coated polyethylene

(Number of days to penetration)

Oil	*Polyethylene 1.5 mils*	*Coated polyethylene 1.7 mills*
Cottonseed	25	Greater than 90
Mineral	4	Greater than 90

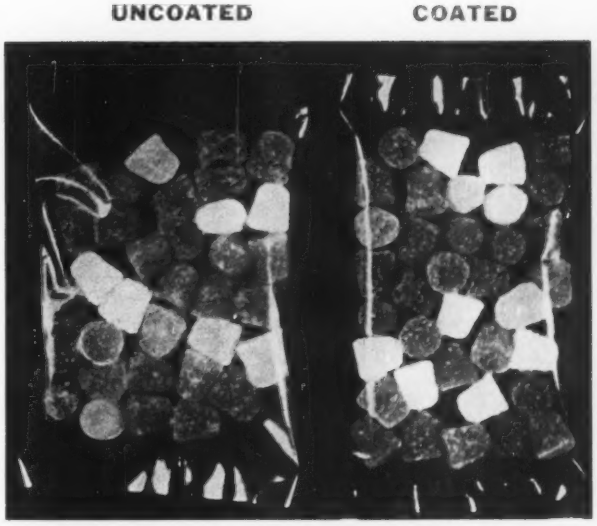


Figure 2. *Two packages of sugar-coated gum drops, both made of 1.5-mil polyethylene film, both stored and handled in the same way. Greater clarity of the polymer-coated polyethylene shows that it resists the abrasion of sugar particles.*

Protection of packaged products from contamination by foreign odors penetrating the package, as well as protection of adjacent materials from contamination by odors from materials within the package, has been a shortcoming of commercial polyethylene films. Tests performed with such flavors as cloves, vanilla and onions, as well as with vinegar, have shown that the coated polyethylene film is far superior to uncoated polyethylene. Table IV summarizes the results of laboratory tests conducted to determine odor resistance. The comparative values are also given for polymer-coated and MST (nitrocellulose-coated) cellophanes.

Heat sealability and strength of seals. Early attempts by others to produce a two-side-coated, heat-sealable polyethylene film have not been successful. Until the development of Olin Mathieson's new product, coating adhesion to the base sheet has been poor. The expedient of coating on only one side in order to make use of the strong polyethylene-to-polyethylene seals has been used (1).

Through use of especially developed techniques and coating formulations in our laboratories, a heat-sealable coated polyethylene has been achieved. By use of somewhat higher temperatures than required on most packaging equipment encountered in the field of polyethylene, it is possible to obtain coating-to-coating seal strengths equal to those found for uncoated polyethylene. Data in Table V show the

Table IV: Odor resistance of packaging films
(Hrs. required to pass through the film)

Odor	*Polyethylene 1.5 mils*	*Coated polyethylene 1.7 mils*	*OX-511 cellophane*	*MST-type cellophane*
Clove	0.03	2	4	Greater than 8
Vanilla	0.07	6	1	1
Onion	0.03	Greater than 8	1	0.5
Vinegar	0.07	Greater than 8	0.5	0.5

Table V: Heat-seal strengths of coated polyethylene

Sealing-bar temperature, °F.	*Sentinel sealer* seal strength, g./1.5 in.*	*Roto bag sealer† peel strength, g./1.5 in.*
225	25	
250	520	
300	1590	60
370	2310	130
400		1810
450		2350

*Seals made at 0.5 sec. contact time and 30 lbs. in.^{2} pressure. At 230 deg. F. and higher, uncoated polyethylene gives a weld seal.
†Bottom seals, bags made at 60/min.

Table VI: Physical properties of coated polyethylene

Test	*Polyethylene 1.5 mils*	*Coated polyethylene 1.7 mils*
Tensile strength to break, lbs./in.^{2}		
Machine direction	3,100	3,700
Transverse direction	2,200	1,900
Tear strength, g.		
Machine direction	120	150
Transverse direction	400	510
Elongation, %		
Machine direction	420	520
Transverse direction	1,320	860
Falling-ball impact strength, kg.-cm.	20.5	18.2
Blocking grade (hand grade)	1+	1+
Anchorage of coating, immersion in water at 75 deg. C., time to failure, hrs.		Greater than 4
Coefficient of friction	0.25-0.50	0.20-0.25
Pendulum impact, kg.-cm.	9.0	4.0

results of tests on the Sentinel sealer and the Roto bag machine operating at a speed of 60 bags a minute. The anchorage of the polymer coating to the polyethylene base sheet as determined at accelerated conditions shows that Olin Mathieson coated polyethylene has the highest adhesive quality of any coated packaging material currently in use.

Performance on converting and packaging machinery. Printing of coated polyethylene has been very satisfactory on runs in several large converting plants and during laboratory tests. Inks for conventional polyethylene and polymer-coated cellophane were used, with equally excellent results.

The improvement of the generally poor slip of uncoated polyethylene by the addition of the polymer coating has resulted in excellent performance on packaging machinery designed to handle polyethylene, as well as on machines making adhesive seals. In packaging applications, the useful physical properties of polyethylene have been retained. The application of the thin coating has left polyethylene with approximately the same durability properties as before. Data on polyethylene's physical properties are shown in Table VI.

Appearance. By applying a polymeric coating to polyethylene, a film has been produced which has excellent surface gloss, clarity and sparkle. In this manner, one of the principal barriers to more widespread use of polyethylene film has been overcome. The clarity of coated polyethylene is clearly demonstrated in Figures 1 and 2. The application of the coating has also solved the abrasion problem common to the soft, uncoated polyethylene when it is used to package materials which are hard and have sharp surfaces, such as hard candies coated with sugar crystals. Tests have shown that such items, when packaged in coated polyethylene film, retain their sparkling appearance [*Continued on page 134*]

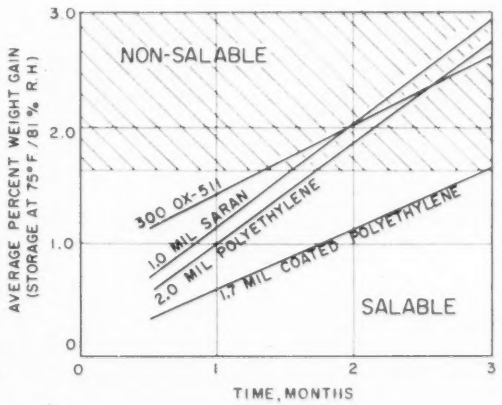
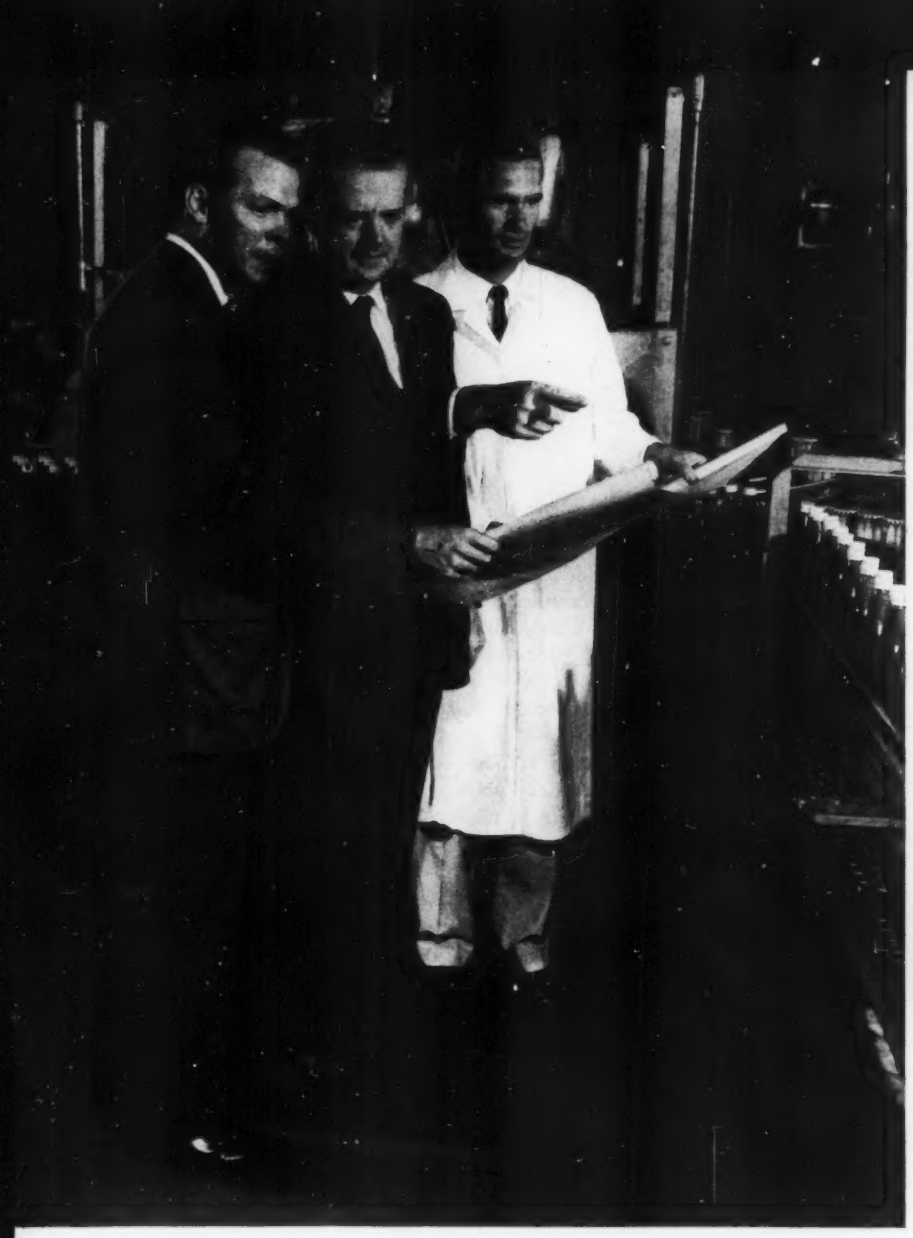


Figure 3. *Effect of the protective properties of various packaging films on the sales life of lemon drops.*



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Nomograph for yield values

A graphical aid is suggested for quick determination of yield and basis weight of free films.

*By A. D. Galbraith**

All too often it is necessary for packagers to determine the yield or the basis weight of a free film. Most manufacturers furnish this data to film suppliers on specification sheets, but their use means file searching and refiling.

Converters and packagers can now obtain basis-weight and yield data for the common plastic films very simply by drawing a straight line on the nomograph illustrated on the facing page.

The nomograph is based on the definition of density (ρ). $\rho = \frac{\text{weight}}{\text{volume}}$

In the term basis weight (B.W.) we already have weight for a given area and only need the thickness (t) of the web to calculate volume of the web. Then, where K is a correction constant, density can be expressed as $\rho = K \frac{\text{B.W.}}{t}$

The nomograph was made according to standard methods (1, 2, 3)[1]. For extra convenience, yield values have been placed on the same line as basis weight. This is justifiable because yield is a function of the reciprocal of basis weight.

Another convenience factor was added by plotting the densities (4) of some of the common plastic films and marking them on the density line. The nomograph user can insert other types of packaging materials whenever needed.

In order to use the nomograph, just draw a straight line through two known points—the film density and the film thickness, for instance—and extend it to cross the third line. The desired information is then read from the point of intersection.

Examples

The following examples show the variety of uses to which the nomograph can be put:

Example 1. What is the yield obtainable from 2-mil polystyrene film?

(a) Place a mark on the left-hand line of the nomograph where the arrow from the word "polystyrene" points to the density line.

(b) Place a mark on the diagonal line (thickness scale) of the nomograph at the point 2.0 mils.

(c) Lay a straight edge (edge of a sheet of paper or a ruler) so that it touches both points.

(d) Make a mark on the other (right hand) line of the nomograph.

(e) This point lies one-sixth of the distance between 13,000 and 14,000 sq. in. per pound on the yield line, or at 33.8 lbs. per 3,000 sq. ft. basis weight. The yield is then 13,000 plus one-sixth (14,000-13,000), or 13,167 sq. in. per pound.

Example 2. What is the yield of an 8-mil sheet of low-density polyethylene? This film's thickness is too great to plot on the nomograph; therefore, divide the thickness by some convenient number such as four or eight. Determine the yield using this reduced thickness factor. Then divide the yield by the same number used to reduce thickness.

Using four as the divisor, the reduced thickness is 2 mils. The yield of 2 mils low-density polyethylene is about 15,075. When divided by four this gives the yield of 8-mil low-density polyethylene as about 3,760 sq. in. per pound.

Example 3. What is the yield of a material having a basis weight of 16 lbs. per 3,000 sq. ft.? Simply look to the right side of the line on the nomograph—27,000 sq. in. per pound.

Example 4. Adding a new plastic to the nomograph. If density of the plastic is known, just mark it on the left side of the density scale and label it. If, however, you have only thickness and yield, use the nomograph to solve for density.

Be sure that any new films added to the graph are not actually combinations. Combinations of films or coated films vary in density, of course, because their thickness varies. Fictitious yields would be obtained if, in using the nomograph, coated or combination films were plotted.

References

1. Mackey, C. O., "Graphic Solutions," John Wiley & Sons, Inc., New York, 1944.

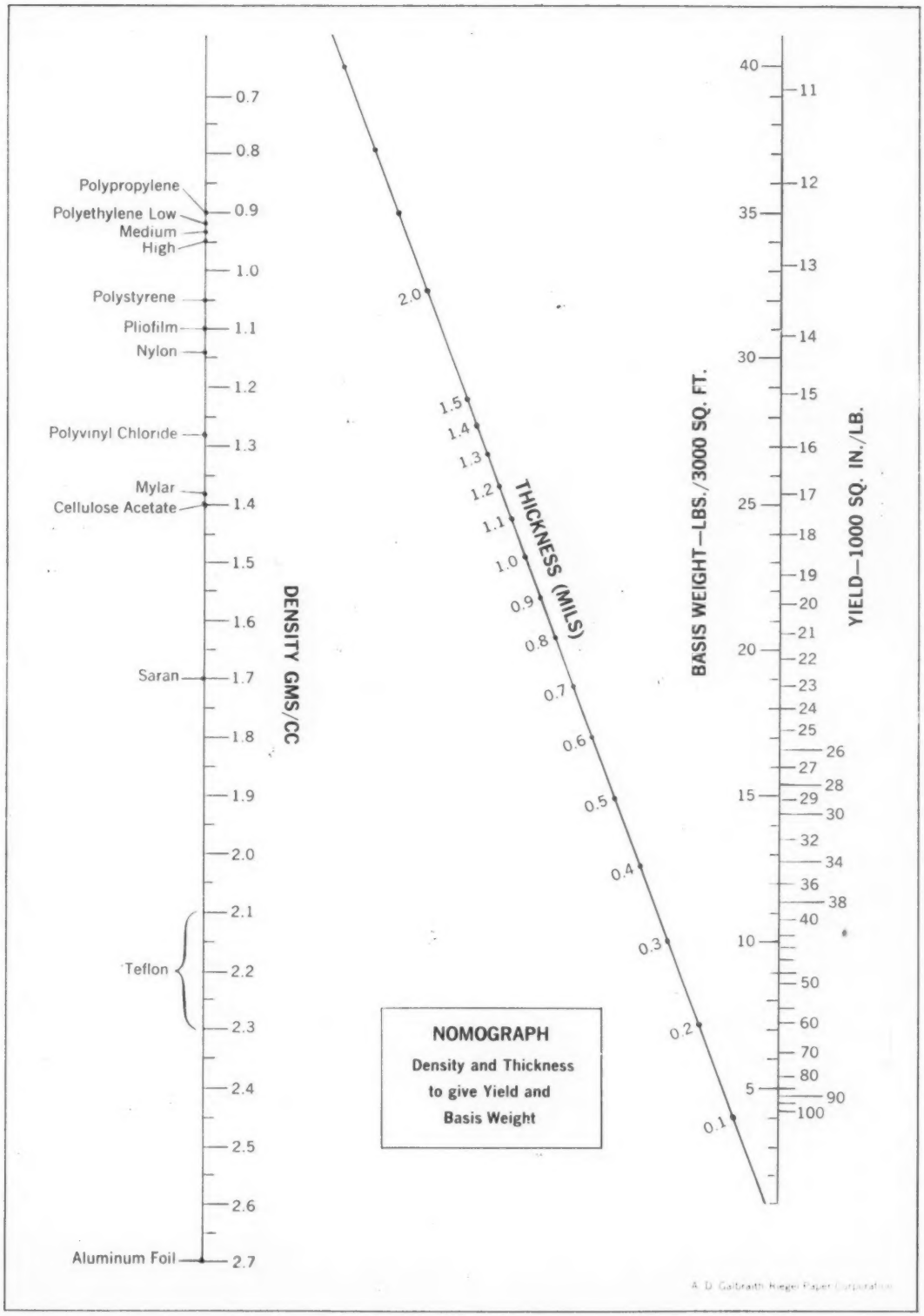
2. Johnson, L. H., "Nomograph & Empirical Equations, John Wiley & Sons, Inc., New York, 1952.

3. Hoelscher, Arnold, Pierce, "Graphical Aids in Engineering Computation," McGraw-Hill Book Co., Inc., New York, 1952.

4. *Modern Plastics Encyclopedia Issue, 1959.*

* Group Leader-Special Packaging Problems, Riegel Paper Corp., Milford, N. J.

[1] Numbers in parentheses identify References appended.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Polyethylene Low
Medium
High
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Polystyrene
Pliofilm
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1.2
Polyvinyl Chloride
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Saran
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BASIS WEIGHT—LBS./3000 SQ. FT.
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Film for chlorinated compound

Q: *We are manufacturers of commercial cleaning compounds. A group of chlorinated compounds contained in large fibre drums with 2-mil medium-density polyethylene liners is giving us a packaging problem. The vaporous chlorine penetrates the polyethylene and, in time, decomposes the fibre drum. We are seeking a plastic liner or an interior drum coating which will prevent high passage of chlorine.*

To date, we have not been able to obtain technical data on the chlorine permeability of various polyolefins. We have information on the gas permeability of various materials, but do not know if it correlates with that of chlorine.

From an economy and storage standpoint, it is not necessary to seek a 100% impervious lining, as the fibre drum will withstand some degree of chlorine attack.

May we have your comments on a lining or liner best suited for our use, along with any information you can supply on film permeability?

A: There is very little reported data on the permeability of packaging films to gasses or vapors other than water vapor, oxygen, carbon dioxide and nitrogen. However, there appeared in MODERN PACKAGING'S Technical & Engineering Section for Nov., 1957, p. 176, a report on "Halogen-Vapor Transmission." This report specifically covered chlorine and iodine vapors, and showed how such measurements can be made. Also included in the article were values for a number of films and composite laminations and coatings. These data will show wide ranges of values between different materials. There is also comment in the article on some of the problems encountered in obtaining extended shelf life for chlorinated products.

Many chlorinated materials require high levels of moisture protection, since chlorine release can be accelerated by moisture pick-up. Also, the permeation of chlorine by a barrier can be affected by moisture, and deterioration of the barrier and the container is likewise accelerated at higher moisture levels.

Perhaps you could reduce the permeation of the chlorine gas by the drum liner through reduction of the moisture content in the product and by using a liner with very low moisture permeability. These requirements, plus the need for resistance to attack by the chlorine, suggest that a multi-ply drum liner would be required for maximum shelf life of the product.

There would also be some benefits in using a fibre drum with an inside coating of a tough, waxy material. Such a coating could retard the attack on the drum from the small amount of chlorine that will pass through the improved drum liner that will be used.

Your laboratory can measure the permeation—both for water vapor and chlorine—of a number of samples of different materials and make up sample drum liners for accelerated storage and shipping tests. This approach will result in improved container performance and will also extend the storage life of your cleaning-compound product.

Unscrambling glass jars

Q: *We have always employed hand operators to uncase and feed glass jars, but would now like to install automatic equipment for this operation. Can you tell us what equipment is available and its speed?*

A: Unscrambling and feeding devices range from semi-automatic rotary and lane-type tables, where the glass is first dumped by hand, to automatic machines that lift glass jars or bottles from the case dividers by means of vacuum cups or devices employing soft, expanding collets. Hand-dumping speeds generally range up to 100 jars per minute per operator for semi-automatic units, but special automatic unscramblers and feeders have been built that hit speeds of 1,000 per minute.

Plastic pack for frozen foods

Q: *Is it possible for us to obtain a rigid, all-plastic tray package that can be hermetically sealed and has barrier properties high enough to protect frozen fruits and vegetables?*

A: Thermoformed trays of high-density polyethylene, low-density polyethylene, polyvinyl chloride or bioriented polystyrene are readily obtained today from a number of suppliers. These containers can be hermetically heat sealed with film covers made either of the same materials or of an extrusion-coated polyester film.

Machines have been developed for automatic or semi-automatic sealing of pre-formed trays and several automatic machines are also available that are capable of thermoforming packages from roll-fed sheet, then filling and closing them.

The permeability of these containers, however, varies widely and depends on the type and thickness of the material in the package. How much permeability you can afford will, of course, depend on your product and is less a matter of empirical values for water-vapor transmission or gas transmission than it is the careful evaluation of the results of storage and taste tests.

Polystyrene packages have been used for fish sticks and for some vending-machine foods. Low-density polyethylene and PVC trays have been applied to some specialty food items and, very recently, Birds Eye has tested a high-density polyethylene package with a polyester-film cover for fruits and vegetables. This latter container has high barrier properties and excellent low-temperature resistance, which may lead to many more food-packaging uses.

Another material under consideration for such containers is polypropylene, which reportedly has even greater resistance to greases than does high-density polyethylene. Packaging tests with this material are proposed as soon as the sheet form is readily available.

The case of the flying flour bag

FEARLESS FULLER: Nice catch, Miss Watson!

MISS WATSON: *Oof! I played error-less ball on my business school softball team—but I never thought I'd be fielding flour bags!*

FEARLESS FULLER: And even with my fireball pitch, no flour seeped out!

MISS WATSON: *I expected to be the "lady-in-white" when I caught the bag!*

FEARLESS FULLER: Not a chance! That bag's sealed with Fuller #2575! Before they found out about #2575, the bagmaker and his customer, the flour miller, often had trouble sealing clay coated stocks used in the bags.

MISS WATSON: *And the flour seeped out, I suppose.*

FEARLESS FULLER: You're so right, Miss Watson! But that's *all in the past* with Fuller #2575. It's a high-speed duplex paste that gives a strong flexible bond. No sifting or gapping. Resists oil, grease and moisture too. #2575 seals *all* kinds of duplex bags—tighter than a Scotchman's wallet!

MISS WATSON: *I bet the bagmaker and the flour miller were relieved to learn about Fuller #2575, Fearless.*

FEARLESS FULLER: Especially that flour miller, Miss Watson—now he can grind flour instead of his teeth!

MISS WATSON: *Oh, Fearless—you're so—so—soothing!*

FEARLESS FULLER: Sleuthing's my business, not soothing, Miss Watson—but we Fuller men do keep our customers happy!

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plants & people

A second major move into the expanded-polystyrene field has been made by **Packaging Corp. of America**, Evanston, Ill. The company has purchased the plastics div. of **Lakeside Mfg. Co.**, Milwaukee, a producer of foamed-polystyrene packaging supplies. The acquisition follows by a month Packaging Corp.'s purchase of **Worcester Moulded Plastic Co.**, Worcester, Mass. According to Packaging Corp., the two newly acquired plants will form the nucleus of a broad plastics division.

Peter P. Wojtul, v.p. of **Continental Can Co.**, New York, becomes also gen. mgr. of the company's boxboard, fold-

Wojtul *Pitts* *Gaines*

ing-carton and fibre-drum operations. **Lewis E. Pitts** moves up to gen. mgr. of the firm's newly created Corrugated Container Div. Eastern District gen. mgr. for the div. is **J. P. Greiveldinger.** New sales mgr. of the Plastic Bottle & Tube Div. is **L. E. Gaines**, formerly a district sales mgr. for **Plax Corp.**

M. Schechter has been named mgr. of the newly formed Eastern Sales Region of **Lily-Tulip Cup Corp.**, New York. The new set-up consolidates operations of the former Metro Sales and Atlantic Regions. **R. C. Snyder** will work as field sales administrative mgr. in the new combined sales region.

Breskin Publications, publishers of MODERN PACKAGING and *Modern Plastics*, will move on March 17 to new and expanded quarters in the new air-conditioned office building at 770 Lexington Ave., at 60th St., New York 21, five blocks from the present location at 575 Madison Ave. The new offices, which will occupy two floors, are convenient of access and will offer greater facilities for readers, including a large technical library on packaging and plastics. Complete details of the new facilities and services will be given in a later issue.

Merger negotiations are under way between **National Starch & Chemical Corp.** and **Kleen-Stik Products, Inc.** Under terms of the merger, Kleen-Stik will become an independently operating, wholly owned sub. of National Starch and will continue in Chicago.

AviSun Corp., Philadelphia, appoints **Henry E. Wessel** as mgr. of sales planning. AviSun manufactures and markets polypropylene polymer, film and fibre.

The Mead Corp., Dayton, reports that growth and diversification have necessitated expansion of its Packaging Div., Atlanta. **Dana M. Hill** has been named to the new post of director of mktg. services. Grouped in the mktg. dept. are the functions of product planning, package engineering, graphic design, advtg. and sales promotion. Executives reporting to Mr. Hill are: **Frank Kaufmann**, product planning mgr.; **Homer Forrer**, package engineering mgr.; **Marshall Stoll**, folding carton mktg. mgr.; and **William B. Smith**, Cluster-Pak mktg. mgr. **H. M. Meyers**, packaging div. art director, has been transferred to the New York office. **Glenn Davis** has been named advtg. and sales promotion mgr., with offices in Atlanta. In the div.'s sales dept., **B. E. Frankel** becomes national account sales mgr., headquartered in New York. **E. R. Shelly** is New York regional sales mgr. Midwest regional sales mgr. (Chicago) is **Thomas Restin.** Los Angeles sales mgr. is **John Watkins.** Sales mgr. of the Lawrence, Mass., plant is **N. T. Steadman.**

Hydro-Chemie, Ltd., Zurich, Switzerland, has changed its name to **Formvac.** The change was made, the company reports, because the Hydro-Chemie name no longer represents its main activity—the designing, construction and sale of thermoforming equipment. The company's machinery is marketed under the trade names Formvac, Formseal and Formpack.

Vigard

New pres. of **H. B. Fuller Co.**, St. Paul manufacturer of packaging adhesives, is **E. A. Vigard.** He succeeds **Elmer L. Andersen**, who was inaugurated governor of Minnesota on Jan. 4. Mr. Andersen served 26 years with Fuller, 19 of them as pres. Mr. Vigard joined the company in 1943. He became v.p. and mgr. of its Adhesive Div. in 1959.

Franklin B. Pollock, board chairman of **Thatcher Glass Mfg. Co.**, New York, becomes also pres. **William J. Green**, former pres., has been elected chairman of the exec. committee of the board. **Hubert J. McPherson** moves up to exec. v.p. **William R. Rifenburgh** has been named Eastern sales mgr. for Thatcher's container div.

Franklin T. Schultz, Jr., has been named sales mgr., multipackaging, for the Boxboard & Folding Carton Div. of **Weyerhaeuser Co.**, Chicago

Henry Lang, exec. v.p. and director, becomes also gen. mgr. of **The Hamersley Mfg. Co.**, Garfield, N.J., producer of glassine, greaseproof and specialty papers. **Harold A. Smith**, v.p. of mfg., has been named a director. **Sumner C. Fairbanks** becomes v.p. in charge of research and development. Secy. is **Edmund Lerch.**

National Research Corp., Cambridge, Mass., has obtained ownership of all patent and licensing rights, trademarks and equipment used in the production and sale of Vaculite metalized papers, according to a joint agreement with **The Champion Paper & Fibre Co.** of Hamilton, O., which terminates its partnership in the operation of **Vaculite Corp.** Vacuum-metalized glassine used for ice-cream bars and candy wrappers will continue to be produced under the trade name of "Alulene." NRC will make the process available to paper manufacturers and converters through licensing and sale of equipment.

Chase Bag Co., New York, names **B. J. Chase** as its new advtg. mgr. Formerly supv. of Eastern produce sales, he will

Chase

now direct advertising, public relations and sales promotion for the company. Mr. Chase has been a member of the company's sales staff for 14 years. **George K. Whyte** takes over the newly created position of Central Regional sales director for Chase Bag, with headquarters in Toledo. He is succeeded as mgr. of St. Louis sales by **James Jackson.**

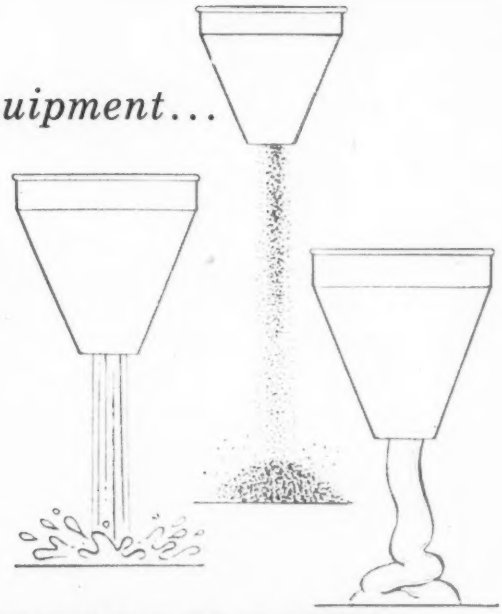
A new Plastics Div. has been established by **R. C. Can Co.**, St. Louis. **Joseph Hines** is mgr. of the new set-up, which will market a line of proprietary plastic containers as well as custom-designed packages. Production is already under way at R-C's Chicago plant on snap-in lids for tub food containers.

New v.p. of sales of the Industrial Products Div., **Kimberly-Clark Corp.**, Neenah, Wis., is **W. B. Meyer.** He succeeds **W. W. Cross**, who has been elected pres. of **Kimberly-Clark International, S.A.** Mr. Meyer will be responsible for the sale of Kimpak interior packaging.

Richard D. Harfst has been named mgr., specialty products, for **The Gardner Div., Diamond National Corp.** He will be responsible for such products as carriers and paraffined packaging.

Responsibility for developing the commercial use of Freon C-318 propellant in aerosol foods has been given to **Lawrence P. Hall, Jr.**, by **E. I. du Pont de Nemours, Inc.**, Wilmington, Del. Du Pont also has realigned sales assignments in its film dept. **John P. Breen** becomes product mgr. for polyethylene. **Robert J. Crowley** has been transferred to the International Dept.,

In filling and packaging equipment...



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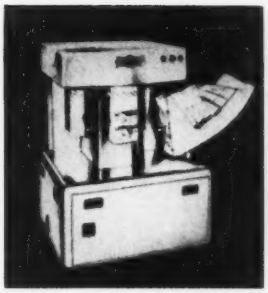
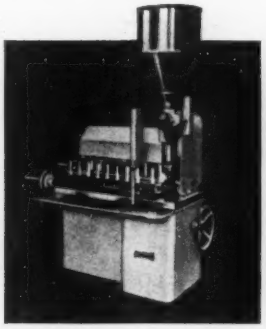
That's Swedish craftsmanship plus prompt U.S. service! And that's what you get in each and every Arenco machine. Performance that is second to none, backed by the service only fully stocked warehouses and skilled specialists can provide. For complete details, write Arenco: one of the most dependable names in filling, packaging, proportioning, closing, sealing and check-weighing equipment.

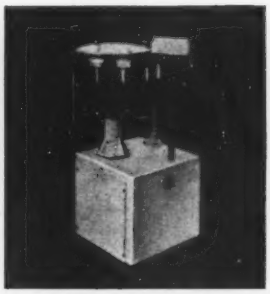


VUF automatically feeds and opens as many as 2100 bags an hour, can serve three combination weighers or portioning machines at one time. Synchronized controls maintain best filling speed, eliminating no-fills or double portioning of hard-to-handle materials. Opens each bag before filling. Handles sizes from 2½"-6¼" wide to 8⅝"-15⅛" high. Quick changeover for biscuits, breakfast cereals or granular products.



GAB automatic tube filling and closing machine packages liquids, semi-liquids and stiff pastes at speeds as high as 3000 an hour. Complete filling, with no air bubbles or pockets. "No-tube, no-fill" efficiency. Takes tubes up to 1½" in dia., 7¼" in length, 1¾"x 8" on special order. Tube-cleaning, cap-tightening, blow-off and coding device standard equipment.

GAN, "big brother" of the GAB, fills and closes up to 7000 units an hour with one operator. Automatic tube feed, photo electric tube register and dual filling nozzles. Tube discharge can be tailored to virtually any cartonning set-up. Handles tube diameters up to 1½", lengths to 7¼". Like GAB, fast changeover from size to size, product to product.



GAP heat sealer works well in combination with the GAB ... enables you to seal perfectly packages of either polyethylene or p.v.c. plastic. Easy to hook up to the parent machine. And on the GAP, precision thermostats maintain proper sealing temperatures for whichever plastic material you work with, whether production is long-run or short.

ARENCO

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BLISTER PACKAGING FACTS!

X Sealing through the blister

(figure 1) boils out the plasticizer making blister flange weak, thinner, distorted and brittle. Wide flange is required because seal must be kept away from blister, or heat will cause deformed blister. Only narrow portion of flange can be sealed, producing unsightly seal which reduces package effectiveness.

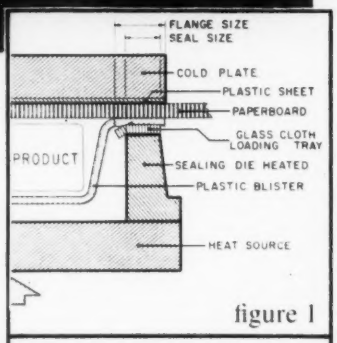


figure 1

√ Tronomatic BlisTpak seals through the package card

(figure 2)...permits use of narrow flange and sealing close to product *without* blister distortion. Flange thickness is pressed firmly into the paperboard fibers for flush flange surface. Material waste is reduced, package is strong, warp-free and attractive.

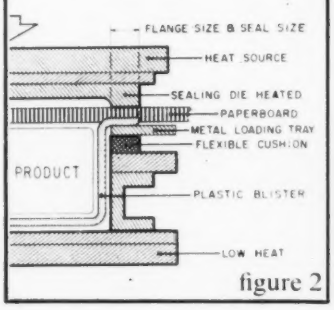
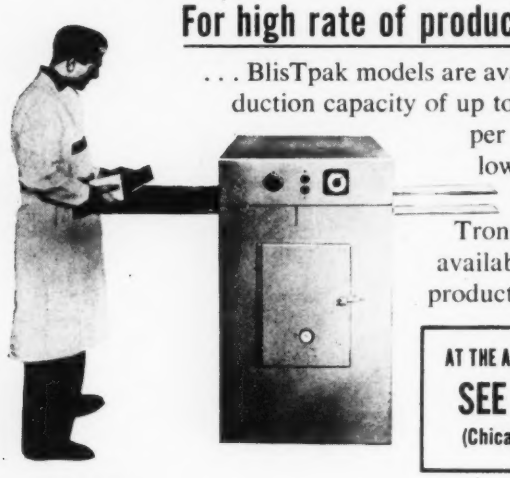


figure 2

For high rate of production



. . . BlisTpak models are available with a production capacity of up to 80,000 packages per 8-hour day at the lowest labor cost per package. Other Tronomatic sealers are available to meet specific production requirements.

AT THE A.M.A. PACKAGING SHOW
SEE BOOTH 203
(Chicago, Ill. April 10-13)

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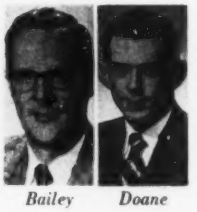
Manufacturers of plastic forming, molding, fabricating, sealing and cutting equipment

Plants & People [Cont'd]

where he will be concerned with sales in foreign markets. He is succeeded as Central district mgr. (Chicago) by **John A. Pié. James W. Truitt** takes over as mgr. of the Southern district with offices in Atlanta.

The specialty products div. of **Riegel Paper Corp.**, New York, names **William E. Butler** as Eastern special accounts mgr., packaging materials sales. **George E. Oakley** becomes mgr. of paperboard sales, Carolina Div.

Promotion of sales executives in four major divisions has been made by **Nashua Corp.**, Nashua, N.H. Four new gen. mgrs. have been named by the company. They are: **Henry W. Bailey**, Package Sealing Div.; **Carl E. Doane**, Flexible Packaging Div.; **Walter P. McLaughlin**, Converter Sales Div., and **Austin W. Sanborn**, Coating Sales Div. Other promotions announced by Nashua: **John F. McDermott**, to sales mgr., Package Sealing Div.; **Carl S. Carlson**, to sales mgr., bakery products, Flexible Packaging Div.; **John D. Clark**, to sales mgr., specialty products, Flexible Packaging Div.; **Carl S. Foster**, to sales mgr., confectionery and paper products, Flexible Packaging Div.; **Philip F. Denner**, to sales mgr., converter products, and **Donald T. Currie**, to sales mgr., corrugated box products, both Converter Sales Div., and **Robert F. Wheeler**, to sales mgr., merchant sales, Coating Sales Div.


Bailey *Doane*

McLaughlin *Sanborn*

George Biner, one of the founders of the **Biner-Ellison Machinery Co.** of Los Angeles, has retired. His interest has been purchased by his partner, **Tom Ellison**, pres. of the firm. At the same time, **Steve Ellison** was promoted to the post of gen. mgr.

White Metal Mfg. Co. has installed a new rotary casting facility for the production of aluminum slugs at its Hawthorne, N.J., plant. The installation is being used in the manufacture of collapsible aluminum tubes directly from primary aluminum ingot. Some 750,000 tubes daily are turned out at the plant, in addition to rigid aluminum containers. The new rotary casting facility was developed in cooperation with **Aluminium Ltd. of Canada.**

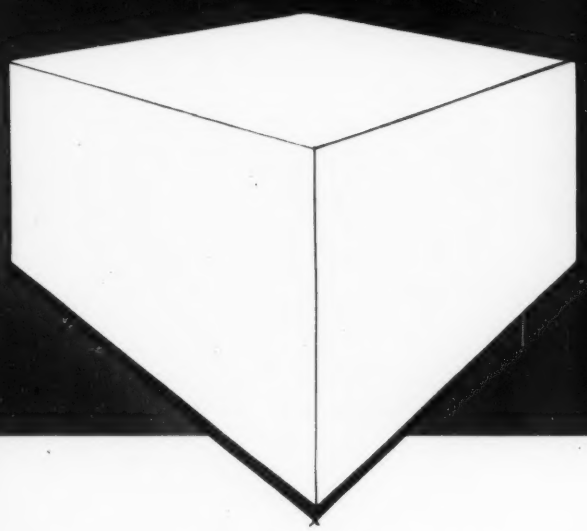
Changes in organization of the sales div. have been made by **Thilmany Pulp**

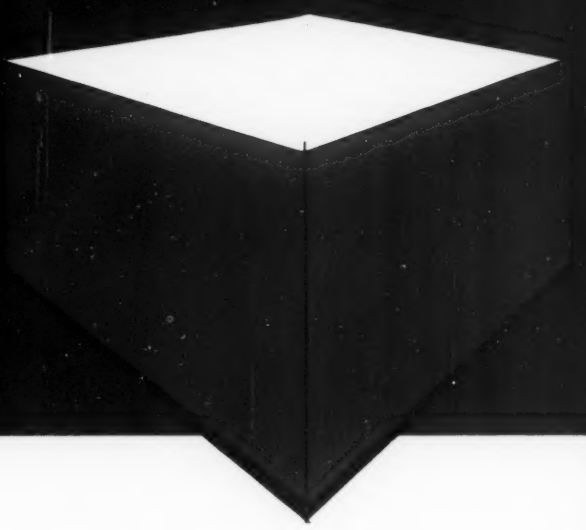
NUMBER ONE OF A SERIES

Carriers from Eastex cylinder board win sales!

But here are some details you may not know... see next page

More and more converters are choosing EASTEX cylinder board for sales-winning can and bottle carriers.





EASTEX cylinder board is bright white. Its brilliance adds snap to every color used in package design — gives packages the over-all look of quality that creates sales.

EASTEX cylinder board is smooth, has a superior printing surface. Colors go on uniformly, results are *uniformly dependable* — and packages look fresher longer.

EASTEX cylinder board is a high quality bleached sulphate, kraft back board made from bleached and unbleached virgin pulp. It is also available in coated carrier grades — all with exceptional strength, durability, folding and bending properties.

Call or write the mill, or the office nearest you for complete details on carrier and other cylinder grades from EASTEX.

Printed on .008 Texcard, Eastex' solid bleached sulfate board, coated two sides.

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Pulp and Paper Company

General Sales Office: P. O. Box 816, Silsbee, Texas, Telephone—EVergreen 5-3711 · **Eastern Sales Office:** 122 East 42nd St., New York, N. Y., Telephone—OXford 7-2980 · **Midwest Sales Office:** 103 Builders Bldg., Chicago, Ill., Telephone—RAndolph 6-1068 · **Western Sales Office:** 1151 South Broadway, Los Angeles, Calif., Telephone—RIchmond 7-6126 · **Western Sales Office:** 210 California Street, San Francisco, Calif., Telephone—SUtter 1-6123

Agent, Perkins-Goodwin . . New York (MUrrayhill 8-4900)—Chicago (FRanklin 2-1395)—Lufkin (NEptune 4-5561)

& Paper Co., Kaukauna, Wis. A mktg. group has been set up, reporting through mktg. v.p. **J. T. Thomas.** Members of the newly created mktg. sections are: **R. B. Vogt,** protective and packaging papers; **A. J. Gerharz,** decorated and cover papers; **R. A. Knapp,** converting papers, and **N. A. Zanzig,** advtg. and art responsibilities.

Three new divs. have been created by **The Borden Chemical Co.,** New York. The new divs., and the v.p. in charge of each, are: Adhesives & Chemicals, **Raymond J. Lodge;** Western Operations, **Ray T. Hanson,** and Thermoplastics, **Harry C. Wechsler. Henry L. Schmidt, Jr.,** becomes gen. mgr. of the Resinite Dept., part of the Thermoplastics Div. Borden also reports that **Barton B. Wadsworth,** v.p., has retired.

Dow Chemical Products Co., Div. of The Dow Chemical Co., Midland, Mich., has purchased the plant of **Sheet Aluminum Corp.** of Jackson, Mich.

Lanigan

Vincent C. Lanigan has been named v.p. and appointed to the new position of asst. to the gen. sales mgr. by **Forbes Lithograph Mfg. Co.,** Boston. Mr. Lanigan joined Forbes' gravure div. in 1954. He was formerly associated with **Reynolds Metals Co.** Forbes offers lithographic, letterpress and rotogravure services for the packaging field.

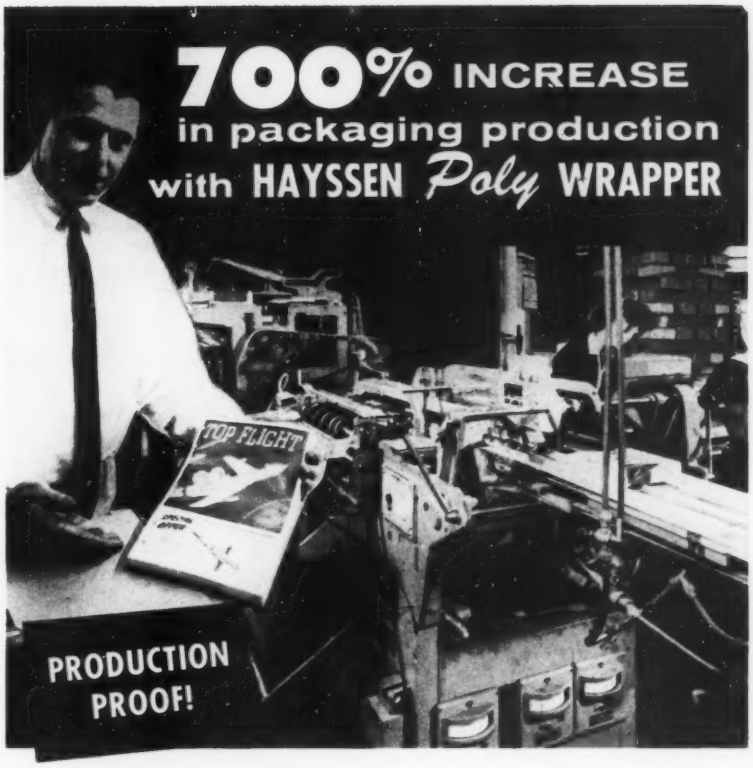
Delmont J. Lohuis has been appointed asst. to the v.p. in charge of corporate research, machinery development and new products at **American Can Co.,** New York. Formerly director of research at the Canco Div. laboratory in Barrington, Ill. Mr. Lohuis will locate in New York where he is also to act as asst. to the v.p. of Canco Div. research and development.

An expanded research and engineering dept. has been established by **B. H. Bunn Co.,** Chicago manufacturer of package-tying machines. Heading up the new dept. is **Douglas A. Gregory,** who has been designated v.p. According to the company, the new set-up will serve two functions—to search out new applications for tying equipment and to devise machinery to meet these situations.

Stuart W. Rabb is mgr. of the newly formed dairy sales div. of the corrugated div. of **Container Corp. of America,** Chicago. **Balfour Phelan,** v.p. in charge of boxboard and carton operations for the company, has retired.

Allan R. Dragone has been appointed mgr. of the National Metalizing Div. of **Standard Packaging Corp.,** New York. Located in Trenton, N. J., the div. applies metalized coatings to paper, film and fabric.

After combined service of nearly 130 years, **Philip C. McGrath, Louis J.**



This Hayssen Wrapper allowed Top Flight Paper Products, Inc. of Chattanooga, Tenn. to increase its packaging production by 700% according to Mr. Montgomery Robinson, Vice President, Sales. Present production is 1,500 packages per hour as compared to the 180 average rate of the older system. Purchased to operate a mere 16 hours a week, the greater demand for the new poly package increased machine use to 120 hours.

HAYSSEN – WRAPPED poly packages give your customers these important advantages

■ **LONGER SHELF LIFE**

Polyethylene lasts longer, protects longer than any other low cost transparent wrapping material. Keeps products fresh and clean indefinitely.

■ **TAMPER-PROOF PACKAGES**

Sheets cannot be removed without destroying package. Hayssen wrapped poly-paks are sealed on all sides.

■ **CUSTOMER ACCEPTANCE**

Neat, clean Hayssen-formed packages sell fast, gain customer confidence in product.

first in Automatic Packaging since 1910

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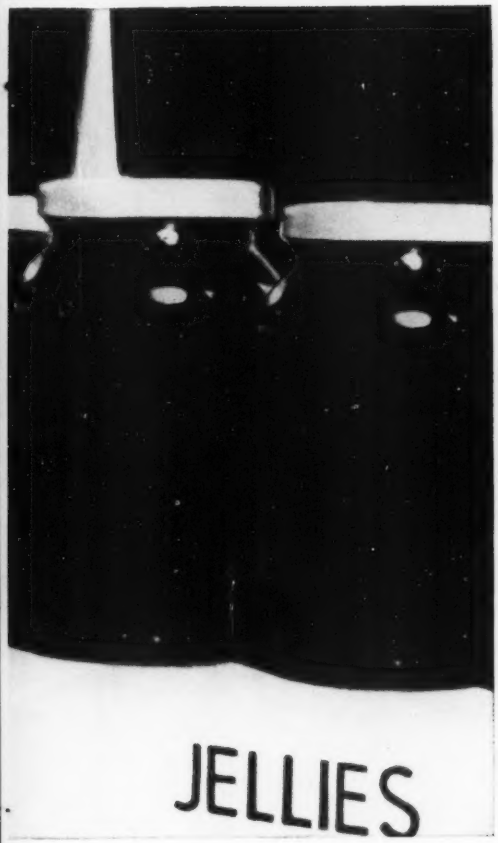
Flawless clarity and customer shelf satisfaction • Eyes feasting upon delicious foods tease appetites . . . what tempts purchase when the food is hidden? . . . The lip-smacking goodness of *your* foods comes to life when they're packaged in glass by Brockway . . . Call it shelf satisfaction, the VISION IN GLASS quality that makes a housewife want to take *your* products off the shelf and put them in her market basket . . . See for yourself—at a glance—why your foods tease sales faster in glass containers by Brockway.

BROCKWAY GLASS

COMPANY, INC., Brockway, Pennsylvania
Sales Offices in Principal Cities

SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. VA.
Tygart Valley Glass Co., Washington, Pa.
Celluplastics Inc., Newark, N. J.



Brockway, first name in containers for:

foods
pharmaceuticals and proprietaries
prescription ware
beverages
beer
liquors
plastic containers
vials and tubing

Integrity in glass since 1907

Plants & People [*Cont'd*]

Finn and **John D. Richards** have retired from **Bemis Bro. Bag Co.**, St. Louis. Mr. McGrath was mgr. of the St. Louis bag plant and sales div. Mr. Finn was mgr. of the Peoria plant and paper mill. Mr. Richards is succeeded as mgr. of the Seattle plant and Pacific Northwest sales div. by **E. G. Muir.** Bemis also has named **Robert L. Baker, Jr.**, as sales exec. in charge of the Cleveland office, **Carl F. Zimmer** as sales mgr. of the Kansas City div. and **George E. Dean** as sales exec. in charge of milling products.

William J. B. Johnson has been elected pres. of **Valley-National Corp.**, Sandy Hook, Conn. He succeeds **H. Reid Sterrett, Jr.**, retiring. Valley National does blister packaging and offers a variety of plastic-and-paperboard combinations for packaging use.

Creative Packaging, Inc., is the name of a new company formed from the merger of **Paper Package Co.**, Indianapolis, and **Diamond Plastics Industries**, Roanoke, Va. The new company will be responsible for the sales management and marketing of all products

Fobes *Mauzy* *Cummings*

(paper and plastic packages and injection-molded plastic containers) manufactured by Paper Package and Diamond Plastics, which will function as divisions. Pres. of the new company is **Donald B. Fobes. Robert M. Mauzy** becomes pres. of the Paper Package Div. and **William H. Cummings** is pres. of the Diamond Plastics Div.

Kobi Polyethylene Bag Mfg. Co. (formerly known as **Koby Bag Co.**) has moved to new quarters at 169 Franklin Ave., Brooklyn 5. The new plant is reported to double the company's production space. Kobi is a supplier of stock and specialty polyethylene bags ranging in wall thickness from 6/10 to 10 mils. A special department has been set up at the new quarters for production of drum and box liners, as well as double-seal liners for packaged liquids.

Harry W. Roth has resigned as gen. mgr. of the **Decorative Foil Div.** of **Reynolds Metals Co.**, Richmond, Va., and as pres. of **Arrow Brands, Inc.**, a Reynolds sub. All products of both divs. are now available through the parent organization in Richmond. Mr. Roth has not yet formulated his future plans.

The International Marketing Div. of **Armstrong Cork Co.**, Lancaster, Pa., has reorganized to concentrate sales management and field sales efforts in overseas marketing areas. **Samuel J. Charles, Jr.**, becomes v.p. and gen. mgr. of **Armstrong Panam Corp.**, and will be responsible for administration of Armstrong's sales in the Western hemisphere, excluding the United States. **Jay H. Hershey** is asst. gen. mgr. Other promotions in the International Marketing Div.: **G. Aaron Smith** becomes mgr. of packaging and industrial specialties; **George H. Stege** is mgr. of market development and sales training, and **Rodger L. Holton** takes over as mgr. of the Australia-New Zealand territory.

A. H. Krueger has retired as purchasing agent for **Visking Co., Div. Union Carbide Corp.**, Chicago, but will continue in a consulting capacity. He is succeeded by **J. D. Kennedy.**

New sales mgr. of Acme Steel Products Div. of **Acme Steel Co.**, Chicago, is **Hugh D. Connell.** He is responsible for the marketing of steel strapping, strapping tools and machines, stitching wire and stitching machines and allied products. He will also manage the div.'s field sales organization.

Risdon Mfg. Co., Naugatuck, Conn., maker of aerosol containers and components, has completed its 50th-anniversary year. To commemorate the occasion, the company has published *Connecticut Enterprises*, a hardbound, color-illustrated 104-page book that traces Risdon's development.

Chesapeake Corp. of Virginia, West Point, Va., has named **James T. Ankrum** as asst. to the gen. sales mgr., **Elizabeth S. Gray** as mgr. of pulp sales and **Clarence J. Topping** as mgr. of board and paper sales. The company produces unbleached kraft pulp, paper and paperboard.

Promotion of sales executives has been made by the Fine Paper & Bleached Board Div. of **International Paper Co.**, New York. **Louis Chable, Jr.**, has been named mgr. of merchant sales. **George H. Stuhr, Jr.**, is mgr. of bleached board sales. In the Mid-Atlantic sales office, **Edward F. Adlum** has become acting regional mgr. and **William G. Luke, Jr.**, is asst. regional mgr. **Courtney H. Reeves** has been promoted to Cleveland regional manager.

Edward C. Marshall has been appointed director of the new-product planning dept. by **American Tag Co.**, Belleville, N.J. The new dept. has been established to broaden the company's operations in packaging specialties.

Philip Ulbrand has been named head art director of the package and corporate-design div. of **Mel Richman, Inc.**, Philadelphia design firm.

Hercules Powder Co., Wilmington, Del., is constructing a second polyolefin unit at Lake Charles, La. When completed, the facility will have double the 50-million-pound capacity of the recently completed adjacent plant, now

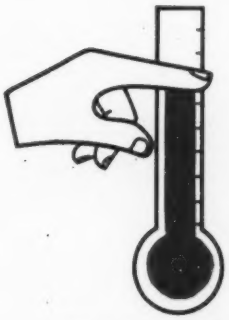
[*Continued on page 147*]

ANOTHER PACKAGING FIRST FROM DU PONT...

MSD cellophanes now seal at

for overwraps* lower temperatures

RESULT: Packaging efficiency goes up ...operating costs come down!



Now . . . major 300-gauge Du Pont MSD (moisture-proof, heat-sealing) overwrap cellophanes seal at temperatures as much as 50° F. less than ever before. Here's what this Du Pont research development means to you:

Fast, trouble-free performance on wrapping machinery! Less dwell time on heater plates. Maximum efficiency at fast wrapping speeds. Films run smoother, handle easier.

Extra-strong seals even at high speeds! Tight, secure packages, fewer cripples and rewraps. Packages are neater, too . . . stay clean and fresh-looking. *They look better . . . are better.*

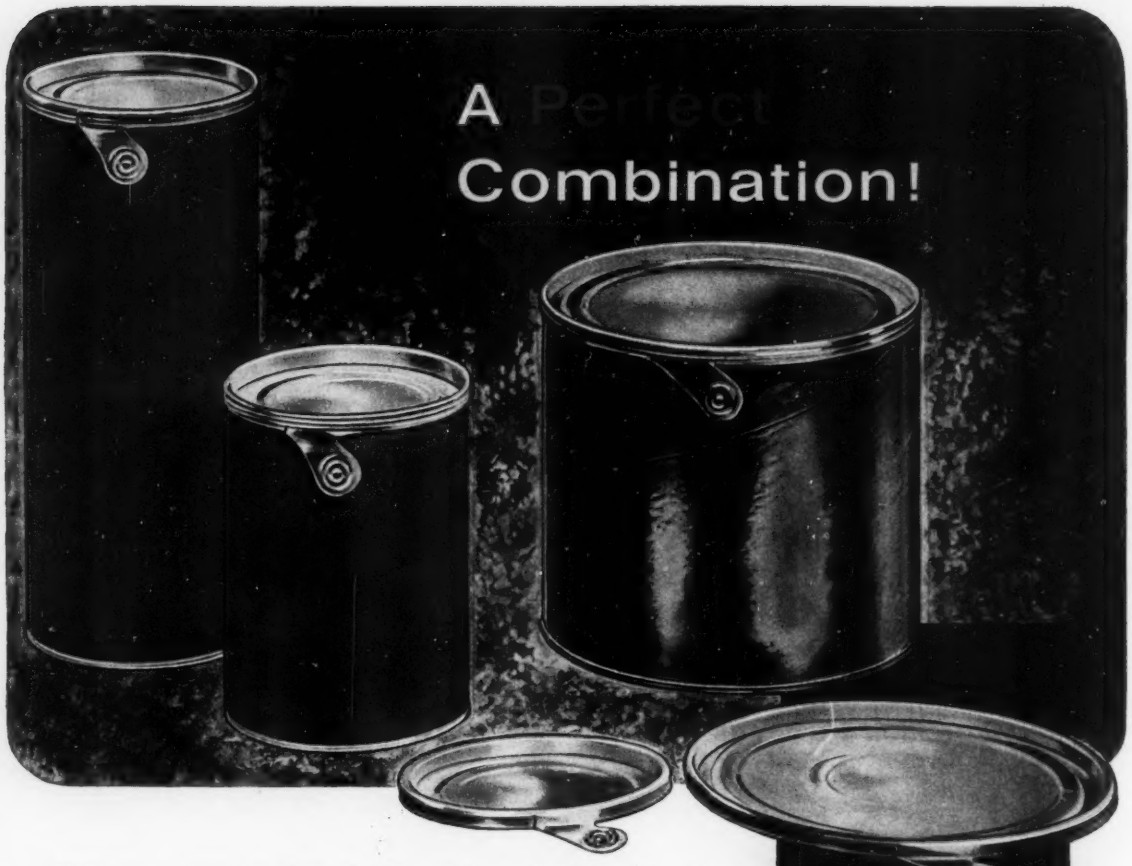
Cut over-all packaging costs! Special rigidity and slip properties, unusual flexibility and durability make MSD cellophanes feed, fold, form so efficiently, economically. Reduce machine downtime . . . costs come down!

Get all the facts. Find out how trouble-free overwrapping can really be. See how you can save money, package more profitably with new lower heat-sealing MSD overwrap cellophanes. Call your Du Pont Representative or Authorized Converter. Or write: Du Pont Co., Film Dept.—MSD, Wilmington 98, Delaware.

*Major 300-gauge MSD overwrapping cellophanes

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT cellophane



This new easy-opening aluminum top, developed by the Central States Can Corporation, used with a Cleveland Container fibre can, makes a perfect combination! When the tabbed seal is peeled off, a smooth edge remains, ensuring a tight fit when top is replaced.

Two diameters ready for immediate delivery!

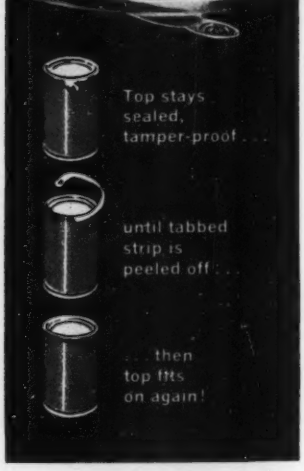
An important advantage exists for products which can be packaged in cans with inside diameters of 2⅜" and 3⅞" because tooling is now available on these two popular sizes.

Containers engineered to exact product needs

Strong fibre containers can be made to any height and specification — **and at low unit cost!** Choice of labels for distinctive identification. Moisture and greaseproof, and anticorrosive liners for added protection.

Combination is ideal for hundreds of products

This seal-and-recap top, used with economical fibreboard, suggest a wide range of packaging applications, such as popcorn, surgical dressings, greases, spare parts, powders, dog food and numerous other products.



Write for a copy of our NEW Packaging Brochure.

THE

CLEVELAND CONTAINER COMPANY

6201 BARBERTON AVE. • CLEVELAND 2, OHIO

ALL-FIBRE CANS · COMBINATION METAL AND PAPER CANS

SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES

CLEVELAND CONTAINER CANADA, LIMITED

Plants & Sales Offices: Toronto & Prescott, Ont. • Sales Office: Montreal

Plants and Sales Offices:
Cleveland
Detroit
Chicago
Memphis
Dallas
Los Angeles
Plymouth, Wis.
Jamesburg, N. J.

Sales Offices:
New York City
Washington, D.C.
Rochester, N. Y.
West Hartford, Conn.
•
Abrasive Division at Cleveland

[*Continued from page 143*]

on stream. When all expansion is completed, Hercules expects to have a total annual production capacity of 200 million pounds, which includes output of its Parlin, N. J., plant making high-density polyethylene and crystalline polypropylene.

Expandex Corp., Wauregan, Conn., has been acquired by **Abington Textile Machinery Works**, North Abington, Mass. Expandex, currently offering custom molding and product design of expandable polystyrene, will add standard molding equipment and custom-designed systems to its services.

Arthur Kurzweil has been named gen. mgr. of **Flyndustries, Inc.**, New York. Formerly with **Revlon, Inc.**, he will be in charge of packaging development and sales service to the cosmetic, drug and pharmaceutical and household-products industries. The company also has opened a West Coast office, at 1225 S. Grand Ave., Pasadena.

Jagenberg-Werke A.G., Dusseldorf, W. Germany, maker of paper-finishing equipment, has set up a new subsidiary, **Jagenberg USA, Inc.** Located at 300 Park Ave. S., New York, the new company will handle all sales and service activities of Jagenberg equipment not covered by special license. Pres. and chief exec. officer of the new company is **Dr. Guenther Meyer-Jagenberg**, also pres. of the parent company. V.p. of sales is **Hans Malitz**. Operations of Jagenberg USA in this country are in the hands of **Thomas S. Greiner**, v.p. and resident manager.

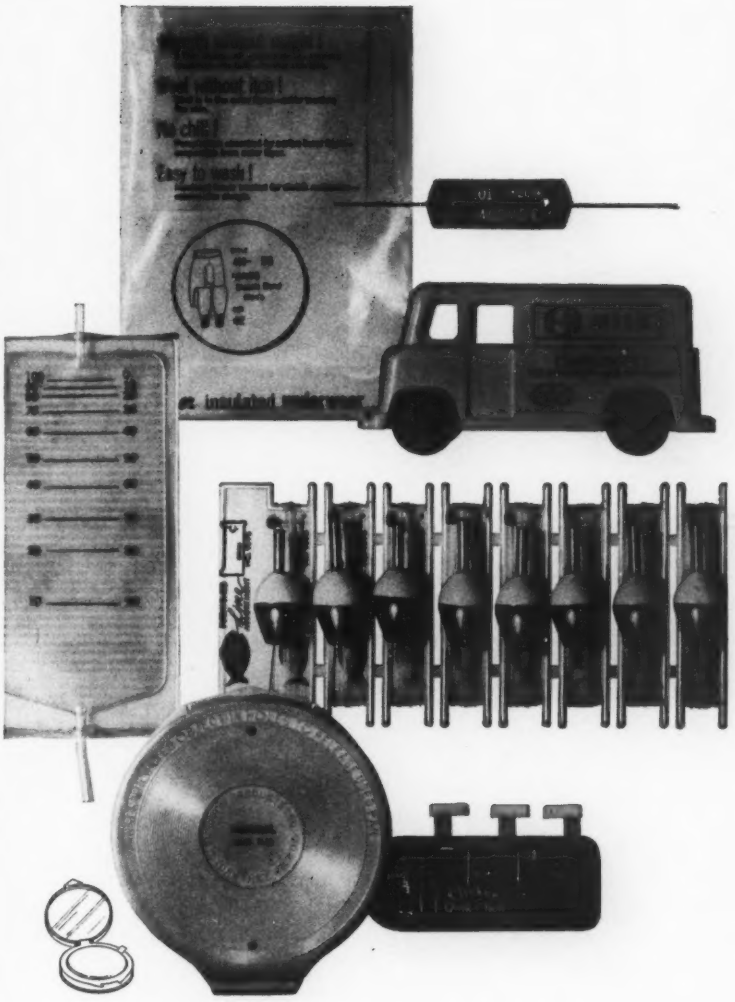
Jagenberg

William N. Davies has been elected v.p. of sales by **Interchemical Corp.**, New York. **Bromwell Ault** becomes vice chairman of the board. **Kenneth B. Lane**, secy., has been elected a v.p.

A new paper and paper-products laboratory at **United States Testing Co.**, Hoboken, N. J., is now offering a complete testing, research and development service to paper manufacturers and converters. A broad range of equipment permits testing for expansivity, burst, impact, tensile strength, etc.

Ray H. Anderson has been named pres. of the **American Sisalkraft Co., Div. St. Regis Paper Co.**, New York. He succeeds **Spencer P. Higgin**, who will become head of a new International Div. of St. Regis, with headquarters in London.

Fome-Cor Corp., Springfield, Mass., has licensed **Alton Box Board Co.'s Container Div.**, Highland, Ill., to manufacture and market containers fabricated from "Fomecor" board, a lightweight foamed-plastic-and-paper sandwich material. The material is said to have good



No doubt about their identification and decoration

—*it stops the eye, tells the story, helps the sale.* This is marking *everybody* can read—made by Markem machines and printing elements. And perhaps most important, the Markem *specialty inks* used have just the right combination of opacity, color, adhesion and drying speed each type of plastic requires.

This is the "Markem method" that can be working for you—the *right* machine, type and ink to do *your* particular marking job quickly, clearly and at low cost, in your own plant. It *stays* clear and attractive because it stays *on* your product and can't fall off or easily smudge. Call your Markem representative for complete facts, or write Markem Machine Co., Keene 1, N. H.

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HELPING YOUR PRODUCT SPEAK FOR ITSELF

Small Package with
BIG
BENEFITS

Johnson & Johnson
DENTAL FLOSS

Attractive, sales quickening, the clear blue plastic cover displays the product, protected from dust and dirt . . . announces when to buy more.

★
EASE
of ASSEMBLY

Custom molded undercut in plastic cover enables smooth, precise, 1-push snapping into metal base.

CREATIVELY PRODUCED
BY
DILLON-BECK
SPECIALISTS in
CUSTOM MOLDING
and SALES-STIMULATING
PLASTIC PACKAGING

Designed by Irvin Gershon
★ DESIGNS & MODELS
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★ MOLDING & ASSEMBLY of THERMOPLASTICS RANGING from 1 to 16 ozs.

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Designers•Molders•Producers
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HILLSIDE, NEW JERSEY

Plants & People [*Cont'd*]

cushioning and insulation properties as well as high compression strength when wet. Fome-Cor Corp. is jointly owned by **Monsanto Chemical Co.** and **St. Regis Paper Co.**

The Eastern district sales office of the Freon Products Div. of **E. I. du Pont de Nemours Co.**, Wilmington, Del., has been transferred from New York to East Orange, N. J.

Owens-Illinois Glass Co., Toledo, has established a new glass-container sales div., preserve products and tumbler sales. The new div. will be headed by **Robert E. Davis**, who is also dairy-products sales manager.

Kreiling

Frank X. Kreiling has been named v.p. and gen. mgr. of **Nicolet Paper Corp., sub. Milprint, Inc.**, West De Pere, Wis. Nicolet is a producer of glassine papers. Mr. Kreiling began his business career in 1934 with the **Institute of Paper Chemistry**, Appleton, Wis. From 1937 to 1960, he was with **Thilmany Pulp & Paper Co.**, Kaukauna, Wis. He joined **Georgia-Pacific Paper Co.**, Portland, Ore., in 1960.

Donald T. Wynne, Jr., has been appointed v.p. and mgr. of the plastics div. of **Vlchek Tool Co.**, Cleveland. **George W. Burhoe** has been named plastics div. sales mgr. Vlchek is a producer of custom-molded plastics.

Richard Oborne has joined **F. Eugene Smith Associates**, industrial designers of Bath, O., as director of package design and graphics.

Bartelt Engineering Co., packaging machinery, Rockford, Ill., has opened a sales office in the Chicago area. It is located at 819 Busse Hwy., Park Ridge.

The **J. H. Dunning Corp.**, Darien, Conn., has acquired the box-manufacturing business of **Chaffee Bros. Co.**, Oxford, Mass. According to Dunning, the acquisition provides additional products, including a complete line of wire-bound and corrugated containers.

Wolverine Flexographic Mfg. Co. is the new name of the former **Wolverine Paper Converting Machinery Corp.** The Detroit-based firm says the new designation more aptly describes company operations in the manufacture of flexographic printing presses.

Packaging Corp. of America, Evanston, Ill., has established a national sales office at company headquarters. **J. C. Mulholland** will head the dept.

Aluminum Co. of America, Pittsburgh, is nearing completion of its $1.5-million expansion project at Davenport, Ia. New foil laminators and complementing equipment will enable Alcoa to produce foil combinations with paper, wax, paperboard and plastic for printers, package makers and converters.

AviSun Corp., Philadelphia, has concluded an agreement with **Shin Nippon Chisso Hiryo**, Tokyo, for the manufacture and marketing of polypropylene resin film and fibre in Japan. Construction of a 30-million-pound-per-year plant in that country has already begun.

The Chesapeake Corp. of Virginia, West Point, Va., has acquired the assets of **Baltimore Paper Box Co.** Management of the new sub. will remain unchanged, except for the retirement of the pres., **H. B. Catzen.**

The Lord Baltimore Press, New York, has opened a sales office in Cleveland. The office is under the direction of **Norman Liman**, area sales manager.

Caspers Tin Plate Co., Chicago, has sold operating assets of its sub., **Olive Can Co.**, also located in Chicago. The buyer is a new corporation which will operate under the name of Olive Can Co., and is completely unrelated to the Caspers company.

Continental Can Co.'s new bleached paperboard mill near Augusta, Ga., is now in operation producing linerboard and bleached board. **William Schnorbach** is mgr. of the facility.

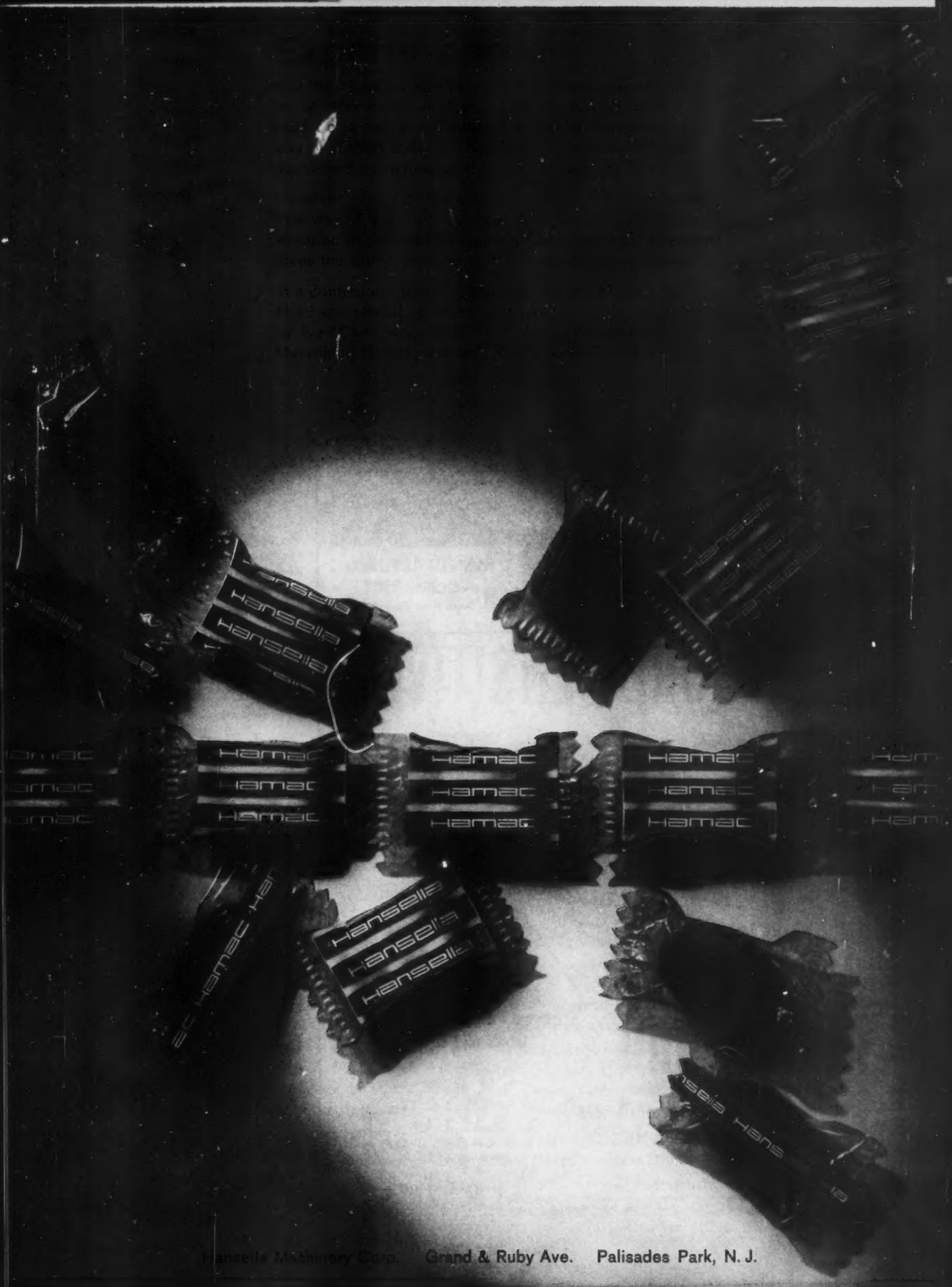
A multi-million dollar building project is under construction at the Atlanta plant of the **Mead Packaging Div., The Mead Corp.**, Dayton, O. When completed, facilities of the plant will have been increased by 40%, says Mead. **Brunswick Pulp & Paper Co.**, Brunswick, Ga., expects to double its manufacturing capacity upon completion of a current expansion program. Brunswick is a jointly owned affiliate of Mead and **Scott Paper Co.**, Chester, Pa.

The **Pressure-Pak Div. of John C. Stalfort & Sons, Inc.**, Baltimore, has completed installation of a high-speed processing and filling line for custom packaging of perfumes and colognes.

An expansion program designed to increase production in its Celon closure and plastic tube divs. has been announced by **Thatcher Glass Mfg. Co.**, New York. The additional facilities at the Muscatine, Iowa, location, are expected to triple the company's production of vinyl, polyethylene and polypropylene squeeze tubes, and to double current plastic bottle-closure capacity.

National Starch & Chemical Corp.'s 14-million-pound polyvinylidene chloride resin plant is now on stream. Located in Meredosia, Ill., the new facility is the latest addition to the firm's multiple plant operation at that location.

The **Heisler Corp.**, Wilmington, Del., has established a service for contract development work in compounding, testing and powdering thermoplastics. The new laboratory is equipped to undertake large-scale contract studies of plastic and elastomer compounding and powdered resin development. The facility will also work to expand the


Hansells Machinery Corp. Grand & Ruby Ave. Palisades Park, N. J.

Elgin
EARNS ITS WAY

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Model GSA

FOR
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waxed paper
aluminum foil
glassine, etc.

★ high-speed, straight-line producer
★ fully adjustable for package variety
★ rapid changeover adjustments

Fully automatic, the great Elgin-Wrap is built to be a steady, swift and easily maintained producer! Designed to handle heat-sealing materials, it can also be equipped with photo-electric registration controls for printed wrappers. And the Elgin-Wrap is unequalled in its price field for speed.

Send samples for quotations and recommendations on your needs.

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LABELS and
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Permanent or removable

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Plants & People [Cont'd]

firm's present line of high- and low-density polyethylene and polypropylene powd rs. Heisler is currently developing powdered nylon.

E. W. Bliss Co., can-making-machinery manufacturer, has moved its corporate headquarters to 4 Gateway Center Bldg., Pittsburgh.

Atkron, Inc., has relocated and consolidated all operations under one roof. New mailing address is P. O. Box 311, Cuyahoga Falls, O. The company makes bottle and can-handling equipment for the brewery, beverage, food-processing, drug, chemical and other industries.

Knox Glass, Inc., Knox, Pa., has established a district sales office at 220 E. 42 St. in New York. **Donald J. Schile** has been named manager.

Increased filling capacity, warehouse space and shipping facilities are features of the new aerosol custom loading plant of **Sun-Lac, Inc.**, Clark, N. J. Using six filling lines, annual capacity is expected to exceed 15 million units, according to the company.

The industrial design company of **Melvin Best Associates** has changed its name to **Melvin Best-Fujioka.** The firm remains at 1247 E. Green St., Pasadena.

Illinois Tool Works, Chicago, has completed construction of a new building to house its **Conex Div.** at 1901 S. Mt. Prospect Rd., Des Plaines, Ill. Product line includes plastic hot drink vending cups, dairy-food containers and carriers.

Promotions

Philip A. Thomas: to asst. director of development, **Union Carbide Plastics Co.**, New York.

J. C. Perry: to v.p. and director, **Hoerner Boxes, Inc.**, Keokuk, Ia. **R. N. Hoerner, Jr.:** to asst. secretary.

Benjamin B. Lipske: to director of research, **National Can Corp.**, Chicago.

Henry C. L. Johnson: to v.p. and chairman of the plans board, **Lippincott & Margulies, Inc.**, industrial designer, New York.

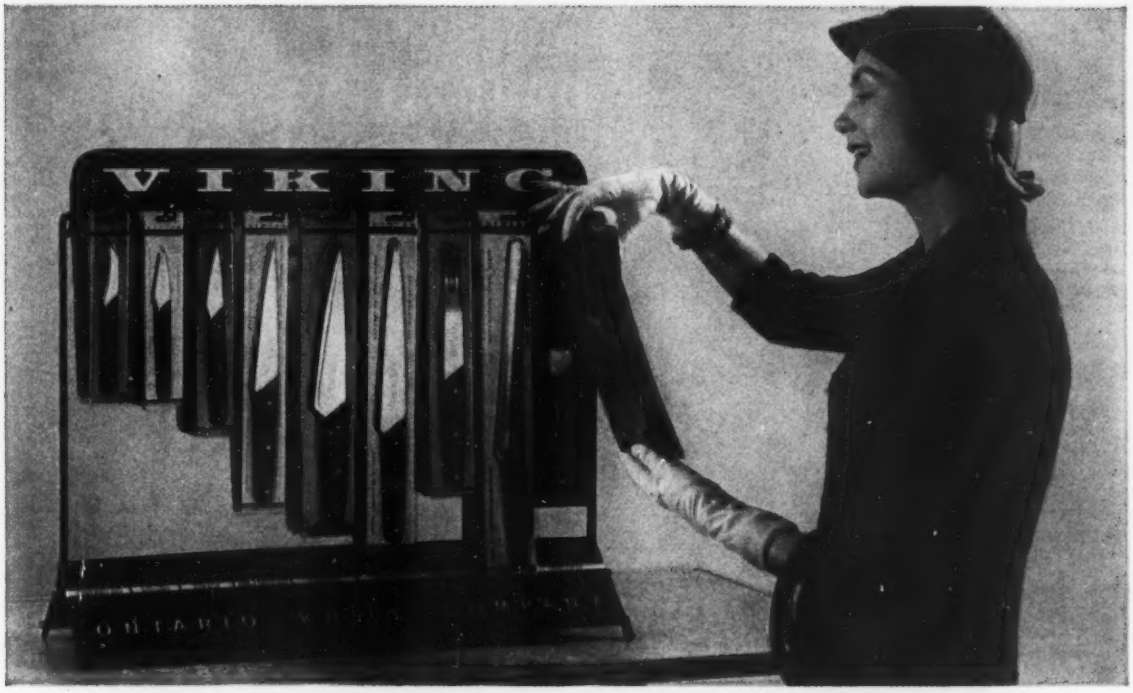
John DiGianni: to v.p., **Frank Giannino & Associates**, industrial designer, New York.

John Langhout: to Eastern sales mgr., Crossett Paper Mills, **The Crossett Co.**, Crossett, Ark. He succeeds **Jack W. Taylor**, now gen. sales mgr.

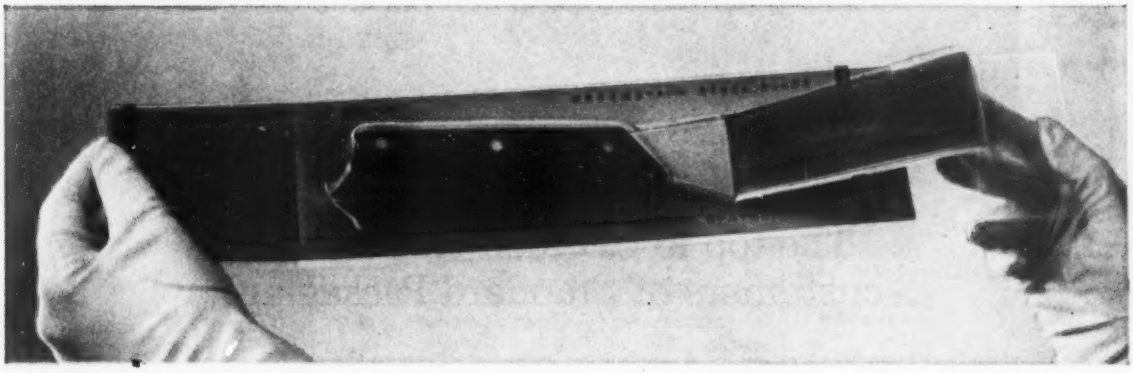
Edward M. Wallner: to v.p. and director, **Dickens, Inc.**, package-design, Chicago.

David P. de Roode: to sales mgr., Southeast region, **Rap-In-Wax Co.**, Minneapolis.

W. Romney Watkins: to v.p. and gen. mgr., folding-carton div., **Old Dominion Box Co.**, Lynchburg, Va. **M. B.**



When design is a sales point– show it with Kodapak



For a market where eye-appeal is important, Ontario Knife Company called on designer Michael Lax to create a versatile new line of Viking knives.

Then Ontario turned to Kodapak Sheet for packages which would both protect the fine steel blades and let the customer see the knives' design.

Why Kodapak Sheet? Because this transparent plastic is crystal-clear, resists abrasion, and is readily formed to produce a package as clean and striking as the knives themselves.

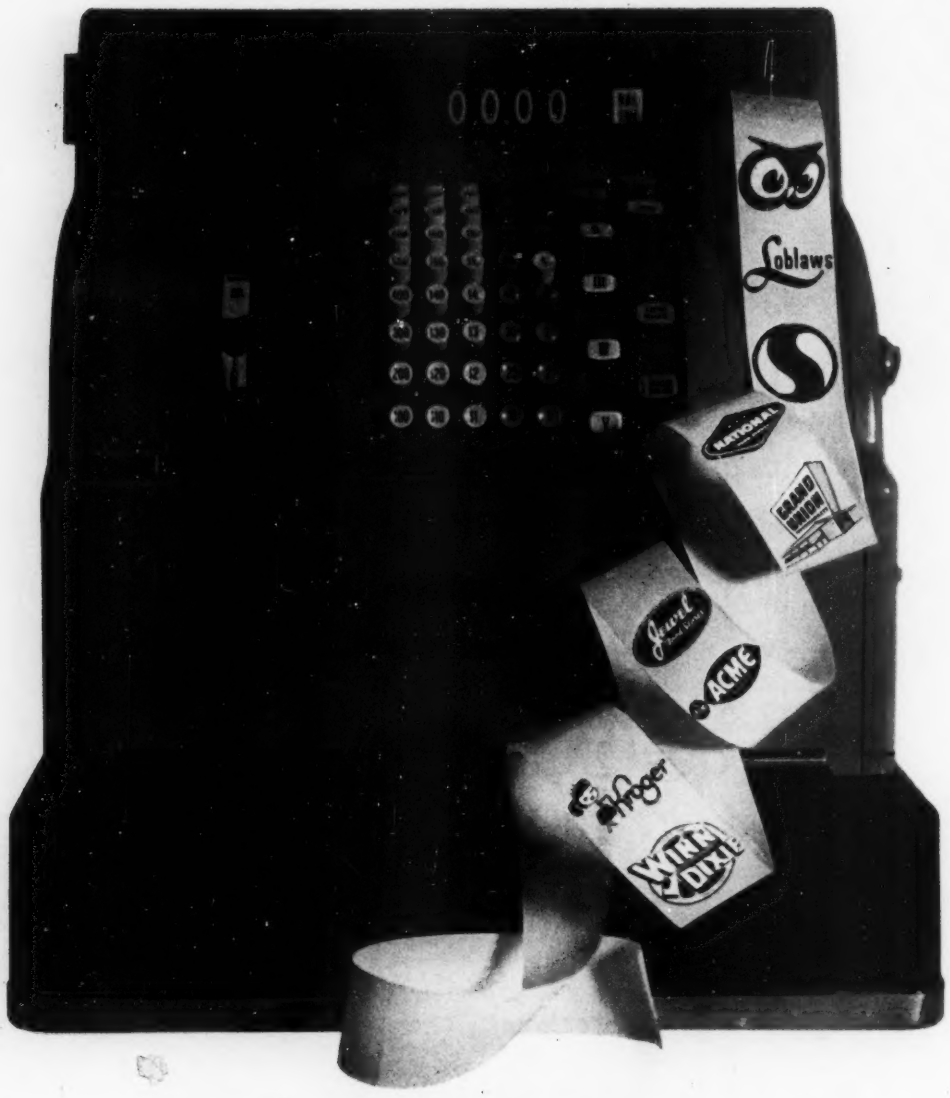
Perhaps you depend on good design to help sell your product. If so, perhaps you too could move it faster if it were packaged in Kodapak Sheet. To investigate, call our representative or write:

Kodapak Sheet

"Kodapak" is a trademark for Eastman's plastic sheet

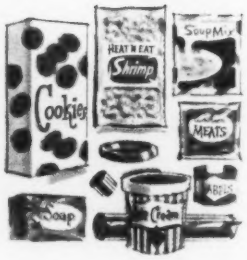
EASTMAN KODAK COMPANY
Cellulose Products Division, Rochester 4, N.Y.

Sales Offices: New York, Chicago, Atlanta. Sales Representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal, (Paper Sales, Ltd.)



The top 15 U.S. food chains are customers of Standard Packaging

The next time that chance, necessity, or a demanding wife drives you to the supermarket, take a look around. You may not know it, but you are virtually surrounded by Standard Packaging products—many of them used by the food chain for its own brands. • What are these products? Eye-catching labels. Colorful cookie boxes. Candy bags that invite impulse buying. Vacuum packages for luncheon meats and cheeses. Plus many other containers of all sizes and descriptions. • Products packaged by Standard are noticed, reached for and *bought*. That's because Standard has a thorough understanding of consumer needs and attitudes. Do you have a product you feel could move faster? Perhaps Standard can help.



STANDARD PACKAGING CORPORATION

EXECUTIVE OFFICES: 200 EAST 42nd STREET, NEW YORK 17, N.Y.

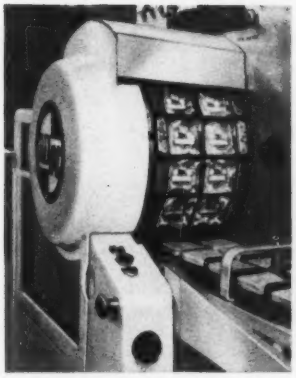
Standard Packaging's marketing approach pays off... in many unusual ways

Paper plates easel-ly displayed

For years, millions of kids and would-be kids have been following *Dennis the Menace's* shenanigans in newspapers, on TV, and in cartoon books. Standard's *Fonda Container Division* attracts this ready-made market to its new *Dennis the Menace* plate with a two-way easel display pack. Standing erect, it shows Dennis at his menacing best. Stacked flat, the brand name and contents are clearly identified. Salesmen call this package "the most persuasive plate salesman in the trade."

Packaging toy blocks poses "many-sided" problem

Build a better building block, and gift-buying Grandmas will beat a path to your door. Especially if they can *see* why your blocks are better. Standard's *Bradley-Gilbert Division* solved the problem for Kusan, Inc. They built a better building blocks *box*. Cellophane windows on four sides give lots of visibility. And a cleverly die-cut inner core fully displays *each* of the 18 blocks. Increased sales prove that Grannies, Doting Aunts and Proud Parents have been beating paths to the toy counters ever since.



Flex-Vac 6-12 – an automatic success

Today, Standard's Flex-Vac® process turns out over 75% of all vacuum-packaged luncheon meats. And here's one of the machines that made it possible—the Flex-Vac 6-12, developed by Standard's *Flexible Packaging Division*. It deposits sliced meat in a laminated film pouch, draws a vacuum, and seals the package. All automatically. A recent study shows that the 6-12 machine saves packers 99¢ on every 100 lbs. of meat. Even more interesting—meat packers report sales increases up to 200% since converting to Flex-Vac 6-12 vacuum packaging.

FILM AND FOIL PACKAGING • FOLDING AND SET-UP BOXES
• CLOSURES AND CAP LINERS • PAPER PAILS, CANS, TRAYS
• LABELS AND OVERWRAPS • LAMINATIONS

Plants & People [*Cont'd*]

Tilson: to v.p. of operations. **C. V. Dodge:** to secy.-treasurer.

John P. Gleason: to mgr., Washington office, **Owens-Illinois Glass Co.**, Toledo. He succeeds **Walter G. Thomas**, who has retired.

G. S. D'Addio: to sales mgr., Chicago, **Mead Papers, Inc., sub. The Mead Corp.**, Dayton, O. **Lewis E. Pedersen** has been named asst. sales mgr. in the same office.

Frederic Salzman: to Central regional sales mgr., **Metal Edge Industries**, Barrington, N. J. **Charles H. Black:** to mgr., western Pennsylvania.

William W. Smith: to mgr., Eastern sales district, **Mosinee Paper Mills Co.**, Mosinee, Wis.

William B. Zemann: to sales mgr., New England district, Avisco cellophane, Film Div., **American Viscose Corp.**, Philadelphia.

Appointments

John L. Boyle, Jr.: from **Standard Packaging Corp.** to mgr., aluminum-foil div., **Lechner Pulp & Paper Co.**, Teaneck, N. J.

Selden Spencer: from **Bostitch, Inc.**, to marketing mgr., **Central Paper Co.**, Menasha, Wis. The firm makes gummed tape and wrapping paper.

Willard S. Fisher: from pres., **Accurate Corrugated Specialty Corp.** and **Arrow Board Co.** to v.p., **Southwest Forest Industries, Inc.**, Phoenix. He will manage the container division. Accurate and Arrow both have been consolidated into Southwest.

Edgar E. Wrege: from **American Viscose Corp.** to administrative asst. to the pres., **AviSun Corp.** Both companies are located in Philadelphia.

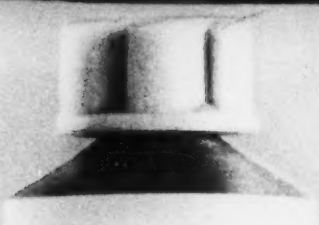
J. Jean Vincent: from **Lippincott & Margulies** to exec. v.p. and director of marketing, **Robert Zeidman Associates**, New York package designer.

Obituaries

Charles R. Van de Carr, former pres. and director of **The Mead Corp.**, Dayton, died Dec. 28 in St. Petersburg, Fla. He was 74. Mr. Van de Carr joined Mead when the company was founded in 1930. He became exec. v.p. in 1942 and pres. in 1948, holding the position until his retirement in 1952. He served as a member of the company's board of directors until 1957.

H. T. A. Richmond, pres. of **The Custom-Made Paper Bag Co.**, was killed Dec. 16 in a collision of two airliners over New York City.

Lyman L. Mead, customer service mgr. of **Fonda Container Co., sub. Standard Packaging Corp.**, New York, died Jan. 9. He was 46 years old.



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IN TUBE PACKAGING

THE DIFFERENCE IN THE SHEFFIELD-PROCESS FOLD-UP METAL TUBES HAS MADE THEM THE CHOICE OF AMERICA'S LEADING MANUFACTURERS ✻ DRUGS, COSMETICS, HOUSEHOLD AND INDUSTRIAL PRODUCTS. MAY WE SHOW YOU HOW THIS DIFFERENCE APPLIES TO YOUR PRODUCT? THE BEST COSTS NO MORE. INQUIRE:

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SALES OFFICES: NEW YORK, CHICAGO, LOS ANGELES

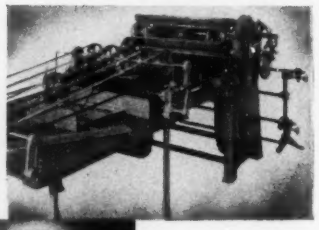
Cosmetics

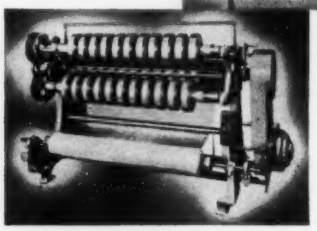
SHEETS FROM ROLLS . . . ROLLS FROM ROLLS

No matter how or what you cut

BECK MACHINES DO IT BETTER

BECK AUTOMATIC ROLL SHEET CUTTER cuts sheets from rolls, no matter what your material: light weight paper to board; film, acetate, polyethylene, pliofilm—even cloth. Delivers sheets accurately cut and neatly stacked.





BECK SLITTER AND REWINDER for fast economical razor edge slitting with less waste. Ideal for all the new specialized materials—polyethylene, acetate, mylar, teflon, etc. Rolls from rolls, slit and rewound evenly and accurately.

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SLITTERS
SHEETER-PRINTER
CAN IMPRINTER
BOX LIDDER
TEAR STRIPPER

charles
BECK
MACHINE
corporation

20 church road, king of prussia, pennsylvania

"SEND FOR THE MAN FROM WILSOLITE"

NEW art forms bring up new problems. There's a Wilsolite technical service representative ready and able to help you with your particular technical problem.

This modern art form demands unique approaches and techniques. Solving problems in flexible printing requires highly specialized training . . . your Wilsolite "tech" service man has it.

Wilsolite Technical Service is organized to give you the kind of help or information you want. When you need help or advice, write, wire, or phone the Wilsolite office nearest you. Our background covers every phase of flexography.

GOODYEAR

Buna N Engraving Rubbers; Grey and Black; thicknesses 3/32" to 1/2", hardness range 20 to 80 durometer, including special inserts for register control. Unvulcanized rubber in Red, Grey and Black plus Sticky-back for plate mounting and Goodyear Related Products.

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Sheet matrix materials: Red or Black fill-in powders, embossing sheets, resin impregnated papers and cloth for shrink control; and perforated metal. Large stocks always on hand. Ask for prices and samples.

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Action is the reaction to Nibroc PRINT-PAK. This whiter, brighter flexible package carries your product's appeal so well that your product gets carried away — in quantity.

Pressmen know the superior printing qualities of Nibroc PRINT-PAK. Its faster, trouble-free runs plus its sales attraction advantages are the reasons "Name Brands" — from coffee to baked goods to dog food — select Nibroc PRINT-PAK. Write for samples and complete information to Dept. MP-3.

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EQUIPMENT & MATERIALS

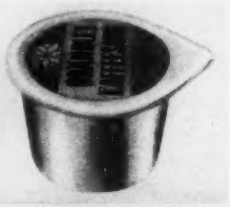
[*Continued from page 46*]

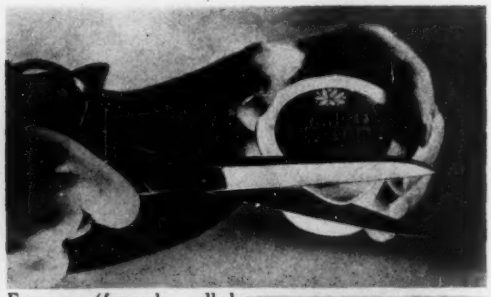
polystyrene film, designed for window-box meat packages, is called Trycite 1100. It is a specially treated biaxially oriented polystyrene film that reportedly resists fogging well beyond the normal shelf life required for meat products. Fogging is eliminated, says the supplier, because the film permits moisture to condense on the surface in an even film (rather than droplets) which remains clear and transparent. *The Dow Chemical Co., Midland, Mich.*

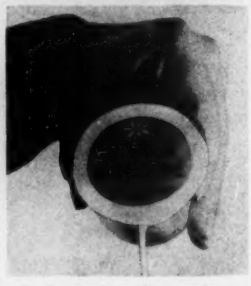
Bread-wrap imprinting attachment

A compact imprinting attachment, designed for standard bread-wrapping machinery and similar intermittent-feed wrappers, is available from Gottscho. The Model C Wrapaprinta uses low-cost roll leaf instead of ink. It is claimed to provide crisp, rub-proof markings even on waxed paper and polyethylene. The automatic attachment imprints price, code data or both in any desired location on the wrap. Markings up to ¾ by ¾ in. can be made. Design of the imprinter makes it quickly removable from the wrapping machine to facilitate leaf replacement and type changes, says the supplier. *Adolph Gottscho, Inc., Hillside, N.J.*

Thermoformed cup container for liquid or paste products can be resealed after first opening



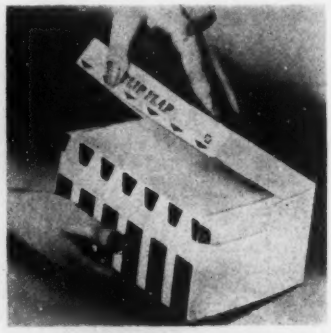




Formvac (formerly called Hydro-Chemie, Ltd.), a Swiss company, reports the development of a two-piece thermoplastic container for liquid and paste products that recloses tightly if the contents are not consumed in a single use. The container, which can be produced in sizes up to ½ pt., is formed, filled and sealed on the supplier's Formseal thermoforming machine. The new container (see top illustration) consists of two pieces; a semi-rigid, "squeezable" body and a pre-printed lid. During sealing of lid to body, a portion of the area between the two components, near the projecting rim of the lid, is left unsealed, forming a double flap. When the container's contents are to be consumed, the flap can either be torn off along a tear line or cut open with a pair of scissors (center illustration). With the application of gentle squeeze pressure on the sides of the container (see bottom illustration), the flap forms a spout from which the contents are poured. Relaxation of pressure on the sides of the container causes the aperture to close tightly, says the supplier, enabling the unused contents to be stored indefinitely. Size and shape of the container can be varied, the company reports. The container is suggested for use in the portion packaging of such products as dairy cream, fruit juices and concentrates, sauces, detergents, vinegar and salad oil. For details, contact *Formvac, Dreikonigstrasse 21, Zurich, Switzerland.*

Convenient new ice-cream carton

Serving convenience and simple reclosure are among the advantages cited by Container Corp. for its new "Flip Flap" ½-gal. ice-cream carton. Feature of the carton is a hinged lid which opens easily from the top when a seal on the front panel is broken. The supplier points out that the hinged lid eliminates the necessity of unlocking end flaps, simplifies dipping and provides for simple, sure reclosure. A special attachment enables the carton to be handled on the same filling equipment used for standard lock-end cartons, says the company. Change-over time to install or remove the attachment is said to be less than five minutes. Forming, filling and closing of the new carton is accomplished in the same manner as for linerless cartons, except for the tabs that form the hinge lid, which are folded and glued automatically on the special attachment. *Container Corp. of America, 38 S. Dearborn St., Chicago 3.*



High-speed scale system

The Merco-Weigher, a high-speed scale system adaptable to powders or free-flowing solid products, is new from Mercury Heat Sealing. It is reported to be extremely accurate, cutting overweight loss by as much as 75% in production runs. Length of feed from storage bin to scale is custom designed in interrelated sections to provide maximum feeding efficiency depending on product, says the supplier. Dual dribble and bulk feeds, running simultaneously in the last section, permit dribble feed to continue after bulk feed is shut off, thereby permitting close control of product weight. The company reports that accurate response is assured by the design of the scale system, which includes such features as extra-sensitive pivot points and lightweight aluminum balance and buckets. *Mercury Heat Sealing Equipment, 2601-21 N. Howard St., Philadelphia.*

High-coating-speed polyethylene resin

Designed to give optimum performance in applications which require low coating weights at high speeds is Spencer Chemical's new polyethylene resin, Poly-Eth 1018. The resin reportedly has been used successfully in extrusion coating at weights as low as 1.1 lbs. per ream, with coating speeds as high as 800 ft. per minute. It has a density of 0.915. Laboratory and field tests indicate that the material can be used at coating speeds which are 10 to 30% higher than normal while retaining required physical properties and good adhesion, the company reports. The resin is suggested for use in applications wherein polyethylene is used as a sealing medium as well as a barrier material, such as laminated

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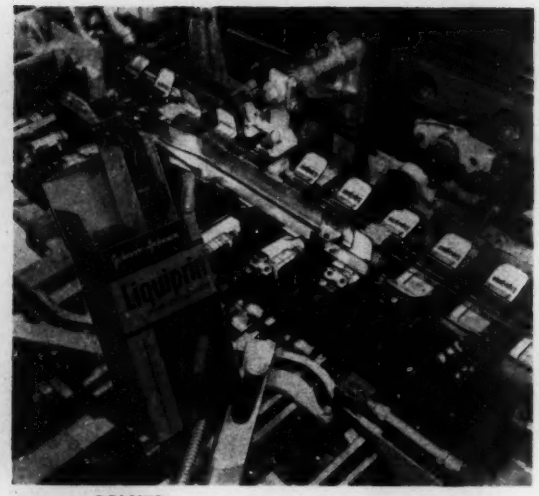

SOLVED: *Another packaging problem by America's most versatile dropper!*

Colonial engineers solved Johnson & Johnson's dispensing problem for its LIQUIPRIN* by placing both dropper assembly and printed insert in a self-enclosed "boat". Result: An attractive all-in-one dropper-plus-instructions unit that keeps the bottle snug in the box.

May we help solve your dispensing and packaging problems? We have representatives near you.

**Trademark For Salicylamide Suspension*

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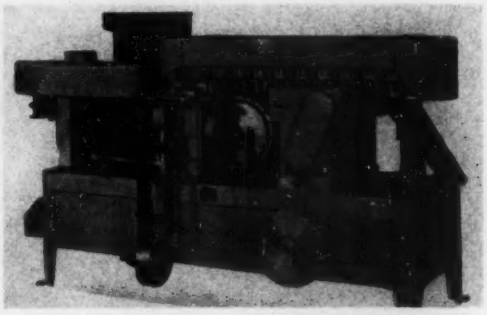
Upon receipt of your subscription request, we will promptly mail the first issue to you. Mail request on your letterhead to: Dept. MP—ARABOL MFG. CO.—110 E. 42nd Street, New York 17, New York.

Equipment & Materials [*Continued*]

pouches and multiwall bags. It can also be used on foil freezer paper and boxboard. The resin is reported to meet requirements for military barrier applications and to be approved for food-packaging use. *Spencer Chemical Co., Dwight Bldg., Kansas City 5, Mo.*

Hard-candy twist wrapper

Claimed to be the first American hard-candy twist wrapper to be developed in more than 30 years is the Latini wrapping machine, distributed by Sheffman. The new machine



incorporates continuous feed to minimize dusting and breakage of the fragile products. It also has multiple twisters, enabling each to work without strain. The machine is rated at twist-wrapping speed of up to 300 pieces per hour. Higher speeds are possible, says the supplier. All moving parts are at waist-high level in the open-construction unit, for easier servicing. Wherever possible, the company points out, standard parts have been used to minimize replacement problems. *John Sheffman, Inc., 150 W. 42 St., New York 36.*

Film for frozen-food packaging

Claimed to possess excellent properties for frozen-food packaging applications is Eastman's low-density polyethylene formulation, Tenite 161M Natural. Film extruded from the resin is reported to offer high impact strength at low temperature, extraordinary tear resistance, good optical clarity and superior slip and anti-blocking features. These properties, the supplier notes, make the film suitable particularly for the bagging or pouch-packaging of loose-frozen pourable vegetables and fruits. The resin has a nominal density of 0.923 and a melt index of 0.7. *Eastman Chemical Products, Inc., sub. Eastman Kodak Co., Kingsport, Tenn.*

Polyethylene handle for multiwall bags

Union Bag is offering a polyethylene handle for multiwall bags. The handle is sewn to one end of the bag and lies flat in inverted position until used. The potential market for this handle, says the supplier, includes all industries which package products in carry-out units of about 25 lbs. The handle has been designed with extra thickness at its shoulder, to give it added strength. Sharp edges have been eliminated by adding thickness across the grip. The handles are available in four standard colors. *Union Bag-Camp Paper Corp., 233 Broadway, New York 7.*

Improvements in cellophane sealing

Du Pont reports that a research development enabling major 300-gauge MSD overwrap cellophanes to be sealed at lower temperature now offers users of the material important improvements in wrapping-machine efficiency and economy. The development was undertaken to meet the demands of high-speed overwrapping, says the company. The cellophanes are said to provide strong heat seals at temperatures of approximately 50 deg. F. lower than previously required. Savings are achieved, the supplier points out, because the improved cellophanes permit faster wrapping speeds while helping to reduce machine down time and rewraps. *E. I. du Pont de Nemours & Co., Film Dept., Wilmington, Del.*

"At *Ansco* ..."

Box Cover Papers must be far more functional than just decoration ... That's why we chose Thilco 7-POINT and TOP-*Glaze* Papers"

— Says ANSCO's Packaging Specialist, Irving Fowle

John A. McNitt, (left) Manager of ANSCO's Advertising Services Dept. discusses a trim, new design to go on one of Thilco's Box Cover Papers with James Murphy, ANSCO Art Director.

"Our Technical Services Department conducted detailed evaluations of box cover papers," says Irving Fowle, ANSCO Packaging Specialist. "We searched for a paper which would pass our severe Composite Safety Factors Test and found both Thilco 7-POINT and TOP-*Glaze* box cover papers to have all the important qualities we require: — Wide range of standard colors; smooth, high finish; remarkable opacity; chemical inertness and unusual resistance to tearing and puncturing."

"Further tests in our box making and printing department," continues Mr. Fowle, "proved 7-POINT and TOP-*Glaze* papers are curl free and glue easily. Their surface takes overprinting well, and even the extra gloss finish of TOP-*Glaze* doesn't have excessive surface slip. In addition, they are soil resistant. We found too, that Thilco papers are basically different; the colors are an inherent part of the fibre and not a brittle surface coating which cracks or flakes when folded."

"The final clincher was the all important study by our purchasing department," concludes Mr. Fowle. "7-POINT and TOP-*Glaze* papers were actually lower in cost than other look-alikes."

THILMANY PULP & PAPER COMPANY
Kaukauna, Wisconsin

THILCO
Box Cover Papers

FOR YOUR INFORMATION

The **Packaging Machinery Mfrs. Institute** reports that the 4th PMMI Show (to be held Nov. 7-10 in Detroit's Cobo Hall) will be approximately 40% larger than the preceding exposition in 1959. PMMI says that 173 manufacturers have so far contracted for exhibit space, compared with 159 for the 1959 event in Atlantic City.

A conference-workshop will be conducted by PMMI in conjunction with this year's show. Its theme will be: "Planned Maintenance: The Profit Tool of Modern Management." The forums will be held Nov. 8 and 9. Participation in the preventive-maintenance sessions will be open to anyone who has registered for the PMMI Show; no additional charge will be made.

Polypropylene is the title of the latest book in Reinhold Publishing Corp.'s Plastics Application Series. The semi-technical volume was written by **Theodore O. J. Kresser** of the Plastics Division Technical Laboratory of Spencer Chemical Co. Its nine chapters comprise a concise, easy-to-read summary of the history, development and uses (both present and potential) of polypropylene. One chapter is devoted to the packaging applications of this versatile polymer, in rigid and flexible form. The author makes the point that polypropylene aerosol containers—because of the plastic's strength and design freedom—may displace the metal spray can in many applications.

The hardbound book contains many charts, graphs and illustrations in its 268 pages. Copies, at $6.50, are available from Reinhold Publishing Corp., 430 Park Ave., New York 22.

Aluminum Foil Container Mfrs. Assn. reports 1960 dollar sales up approximately 8% over 1959 as result of the steady growth of aluminum-foil containers. Figures compiled at the association's 1961 meeting in Chicago last January showed that sales of this packaging commodity increased 70% since 1956. New applications and increasing consumer demand promise further growth during the current decade, according to AFCMA. **A. W. Mengel** of Anaconda Aluminum Co. is new pres. of the organization, succeeding **J. William Didriksen. K. J. Brundage** of Revere Copper & Brass, Inc., becomes v.p. **Stuart J. Swensson** is secy.-treas.

Spurred by "generally chaotic conditions in the requirements for and use of electrical equipment in connection with packaging machinery," the **American Institute of Electrical Engineers** has set up a special Packaging-Industry Subcommittee of its General Industry Applications Committee. Purpose of the new subcommittee is to concentrate on applications problems, examine the over-all problem in terms of results, sponsor forums for idea exchange and formulate standards. The subcommittee has scheduled its first technical conference for May of this year. Chairman of the subcommittee is **J. D. Ramsey**, mgr. of electrical engineering, Campbell Soup Co. Vice chairman is **F. R. Cinco**, chief electrical engineer, Package Machinery Company.

A four-color brochure on the characteristics and applications of Olefane, **AviSun Corp.'s** polypropylene packaging film, has been issued by the company, a jointly owned affiliate of **American Viscose Corp.** and **Sun Oil Co.** Featuring two printed inserts of the film, the booklet gives a general list of properties, including charts and diagrams of the film's WVTR, gas transmission, chemical resistance, etc. Copies and further information are available from John Adrian, AviSun Corp., 1345 Chestnut St., Philadelphia.

Standardization of extraction tests for flexible barrier packages will be developed by **American Society for Testing Materials**, Committee F-2, working with Food & Drug Administration representatives. The group meets March 7 at Michigan State University. **Robert H. Giljohann** of Pet Milk Co. is secretary.

The Containers & Packaging Div. of the Business & Defense Services Administration, **U. S. Dept. of Commerce**, has released "Converted Flexible Packaging Products Industry Outlook for 1961 and Review of 1960." Sales of converted flexible packaging products are expected to increase slightly in 1961 over 1960, according to the bulletin. Sales in the first nine months of 1960 were 5% greater than for the same period in 1959, indicating that this facet of packaging has grown faster in recent years than the Gross National Product and personal-consumption expenditures.

The rapid development and acceptance of carbonated beverages in cans was the topic of a talk delivered by **J. Whitney King** of American Can Co. at the 42nd annual convention of **The American Bottlers of Carbonated Beverages.** Mr. King stated that can sales in 1965 for the soft-drink market will be at least five times 1960 production Copies of the talk are available from William J. Tobin, American Can Co., 100 Park Ave., New York 17.

E. I. du Pont de Nemours has developed a brochure presenting information on the diverse cellophane types now being offered for packaging. Copies of this brochure are available without cost from Product Information Service, Du Pont, Wilmington 98, Del.

New officers have been elected by the **American Rack Merchandisers Institute. Murry L. Sacha**, one of ARMI's founding members, is now pres. of the organization. **Edward Korenvaes** becomes v.p. The group's new treas. is **J. O. Templeton**; its secy. is **Richard B. Kaufmann.**

An honorary citation "for outstanding cooperation with the packaging industry" has been awarded to **A. B. Clunan** by the **National Flexible Packaging Assn.** Mr. Clunan, former mgr. of film sales for Goodyear, is chief of the flexible-packaging branch, Containers & Packaging Div., Business & Defense Services Administration, U. S. Dept. of Commerce.

The **International Trade Fair of Printing and Paper, DRUPA 1962**, will be held May 5-18, 1962, in Dusseldorf, Germany. Sponsored by Nordwestdeutsche AusstellungsGesellschaft, mbH, the show will include machinery, auxiliary equipment and raw materials used in the graphics and paper-converting industries from manufacturers all

Events

Mar. 1-3—**National Flexible Packaging Assn.**, annual spring meeting, Edgewater Beach Hotel, Chicago.

Mar. 7-8—**Packaging Assn. of Canada**, national conference, King Edward Sheraton Hotel, Toronto.

Mar. 9-10—**Dairy Industries Supply Assn.**, 42nd annual meeting, Barbizon Plaza Hotel, New York.

Mar. 12-26—**EMBA, First Portuguese Packaging Show**, Lisbon, Portugal.

Mar. 20-22—**Folding Paper Box Assn. of America**, annual meeting, Drake Hotel, Chicago.

Mar. 20-31—**Purdue University**, Lafayette, Ind., ninth annual industrial packaging short course.

Mar. 30—**National Paper Box Mfrs. Assn. and Packaging Institute**, set-up box symposium, Sheraton Hotel, Philadelphia.

Apr. 4-6—**Research & Development Associates**, 15th annual meeting, Hotel John Marshall, Richmond, Va.

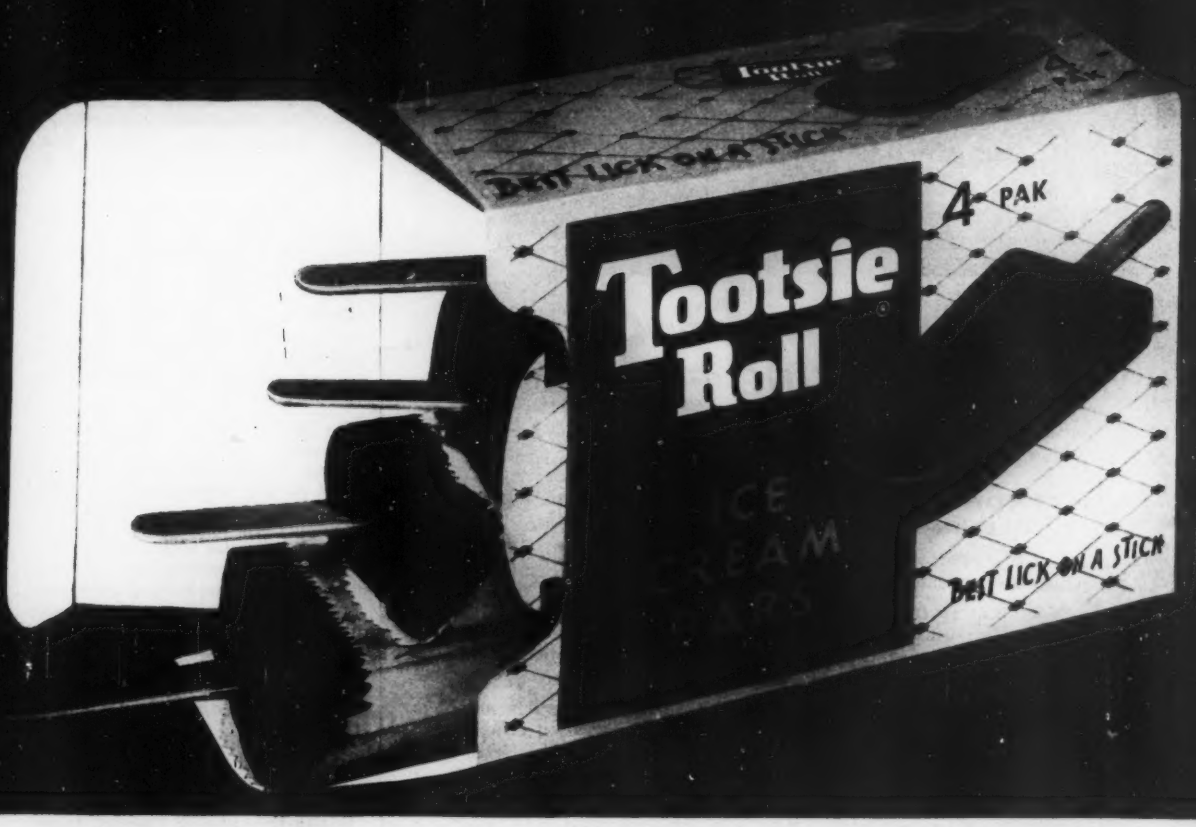
Apr. 10-13—**American Management Assn.**, packaging show and conference, Exposition Center, Chicago.

Apr. 20-21—**Society of the Plastics Industry**, 18th annual Western Section conference, Hotel del Coronado, Coronado, Calif.

Apr. 30-May 1—**Lithographers & Printers National Assn.**, 56th annual convention, Arizona Biltmore Hotel, Phoenix.

All-white sales appeal... with economy!

The package is HiYield™ PRINTKOTE



Pure white—inside, outside and all the way through—this attractive, sanitary-looking carton adds sales appeal to famous "*Tootsie Roll Ice Cream Bars.*" It was produced by one of our customers in two-color letterpress on our new economy bleached board—Brite-Pak Hi-Yield Printkote.

Made from 100% virgin bleached fibre, HiYield Printkote contains more square feet per ton than higher density boards, and therefore yields more cartons per ton. While superior in quality, cartons made from HiYield Printkote are *comparable in cost* to many packages manufactured from much lower printing grades of non-virgin fibre boards.

Here is a new, economical bleached board that will add customer appeal where cost is a major consideration and printability a factor.

See how you can *upgrade* your packaging with Hi-Yield Printkote—write Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, New York.

West Virginia Pulp and Paper

Take the Problems Out of CUTTING FOR BLISTER PACKAGING!

HYTRONIC® Cutting Machines break the bottleneck between vacuum-forming and assembly.

Cutting apart the vacuum-formed cavities has plagued companies using plastic bubble packaging.

Now, the Hytronic Cutting Machine by United Shoe Machinery Corporation brings new efficiency to this cutting operation, making operations between forming and assembly faster and far less costly.

The Hytronic Cutting Machine, with hydraulic power and electronic control, will cut single sheets or stacks without adjustment. It will use dies of varying heights interchangeably. Setup time is eliminated, and many medium-run jobs can be done in the time needed to get other cutting machines ready.

Industry leaders, both in plant operations like that at Carters Ink Company and in contract shops like Wespak, Inc. of Chicopee, Mass., have found the Hytronic Cutting Machine the only economical way to bring the speed of cutting blister packaging units in line with forming and packaging operations.

Fact sheets are available that tell how many other companies have profited with the Hytronic Cutting Machine. Available for sale or lease. Phone for a trial today.

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F.Y.I. [*Continued*]

over the world. Further information may be obtained from the show sponsor at Dusseldorf.

Certificates of award to winning entries in the **Lithographers & Printers National Assn.'s** 11th Lithographic Awards Competition will be presented May 2, opening day of LPNA's 56th annual convention at the Arizona-Biltmore Hotel in Phoenix. After the three-day convention, winning entries will be exhibited in Chicago (May 16-19, at the Hamilton Hotel) and New York (June 6-9, at the Warwick Hotel). They will thereafter be exhibited in principal cities throughout the U.S. A total of 312 award winners will be shown.

Convenience is the biggest advantage of canned soft drinks. This is one of the findings of a consumer-attitude survey conducted by **Continental Can Co.** among 800 men, women and teen-agers. Highlights of the survey are contained in a brochure which is available without cost from the company, at 100 E. 42 St., New York 17.

Lt. Col. Harlan J. Wills (U. S. Army, ret.) has been appointed secy. of the **Research & Development Associates, Food & Container Institute.** He succeeds **Col. Rohland A. Isker,** who had served as secy. since 1948. R&DA acts as liaison between the Armed Forces and civilian organizations in the fields of food and container research and development activities.

The Industry Advisory Committee on Corrugated Container Research, U.S. **Forest Products Laboratory,** held its third meeting recently at the Kodak Park plant of Eastman Kodak Co., Rochester. At the meeting, the committee was briefed on work being done to improve containerboard strength properties and to achieve better wet strength. A major portion of the meeting was devoted to a discussion of a proposed commercial standard for corrugated shipping containers. Newly elected chairman of the committee is **A. H. McKinlay** of General Electric.

Europlastica 61, international plastics exhibition, will be held June 16-25 in Ghent, Belgium. Organized in cooperation with the plastics sections of the Belgian Federation of Chemical Industries and the Federation of Mfrs. of the Metals Goods Industry and the Belgian Plastics Syndicate, the show will encompass raw materials, machinery and finished and semi-finished products for industrial and consumer applications. Further information may be obtained from The Belgian Chamber of Commerce, 50 Rockefeller Plaza, New York.

A total of 88 companies had exhibits at **The Material Handling Institute Pacific Coast Show,** held Feb. 22-24 in San Francisco's Cow Palace. On Feb. 23 in the same exhibition center, the 6th **Annual Materials Handling & Packaging Conference** convened for two days of technical meetings.

WHAT SHAPE IS YOUR PRODUCT IN?

A fair question . . . because shape is often the "secret ingredient" in an outstanding package design.

Here, for example, are five famous products . . . each distinctively presented in a different shaped Tulox container. Shape has contributed to the success of these packages in effective display and product-brand identification. Shape has also permitted "tailoring" the container to the product in each case to assure protection, for convenient insertion or removal, to facilitate storage as well as shelf or counter arrangement.

Only Tulox Semi-Rigid Extruded Plastic Containers permit so wide a selection of these and other attractive, practical shapes and sizes. Tulox is available crystal clear or in brilliant colors, printed or plain and with an equally wide choice of colored closures . . . also comes in the form of sleeves, sheaths or scabbards and may be combined effectively with inserts of other materials.

Furthermore, unique precision production methods permit development of these unusual quality packages, on a volume basis, at a cost often 'way below that of less attractive alternatives. If you would like to see your product in such good company, call upon us for a study of the possibilities.

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Semi-Rigid Seamless Plastic Packages

1EP59

U.S. PATENTS DIGEST

This digest includes each month a brief summary of the more important current patents which are of special interest to all packagers.* Edited by H. A. Levey.

Packaging Method, Russell L. Hoelzer and George H. Lacy (to The Dow Chemical Co., Midland, Mich., a corporation of Delaware). U.S. 2,962,843, Dec. 6. A method for continuously forming, filling and sealing multiwalled packages, at least one wall of which comprises a resinous material.

Cartoning Apparatus, Amherst C. H. Macartney (to the New Haven Board & Carton Co., New Haven, a corporation of Connecticut). U.S. 2,962,850, Dec. 6. A machine for packaging a row of articles in a wrap-around carton having openings for portions of the articles, which comprises a row of parallel, downwardly inclined runways for receptive articles.

Overwrapping Device, Milton A. Howe, Jr. (to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut). U.S. 2,962,853, Dec. 6. An apparatus which will facilitate the manual performance of the diamond-wrap method of overwrapping a tray which comprises a base with dual parallel shafts mounted on and extending above said base.

Box-Making Machine, Rodgers Neely (to Alexander Ungar, Inc., New Brunswick, N.J., a corporation of New York). U.S. 2,962,944, Dec. 6. A machine for manufacturing a box from a unitary blank having a single-thickness bottom-forming part and two double-thickness end-wall forming parts and separate, rigid side walls, comprising a head having a lower surface and end walls and side walls which correspond in shape and relation to each other to the inner surfaces of the bottom.

Can Carton with Chime-Engaging Tabs, Raymond A. Cote (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,963,148, Dec. 6. An open-end, rectangular sleeve-type carton formed of flexible, folding paperboard and adapted to enclose two rows of closed, chimed cans in side-by-side relation, said carton having a top wall.

Multiple Container Package, Thomas F. Brennan and Richard J. White (to American Can Co., New York, a corporation of New Jersey). U.S. 2,963,194, Dec. 6. A container package comprising two cylindrical containers arranged in endwise relation and having adjacently disposed, laterally projecting end seams, and an endless locking ring having at one end thereof an annular skirt secured to and over the end seam of one of said containers to lock said ring.

Dispensing Container, Howard N. Hovland (to American Can Co., New York, a corporation of New Jersey). U.S. 2,963,209, Dec. 6. A dispensing container formed from a single blank suitably cut and scored to provide hinged front, rear and side walls, closure flaps hinged to said walls for providing bottom and top walls, the top closure flap hinged to the front wall being constituted of spaced end panels and an intermediate rear-out panel defined by spaced parallel lines.

Self-Locking Container With Multi-Ply Wall Construction, Harry R. Agler (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,963,211, Dec. 6. A container of paperboard or like material formed from a single sheet of material comprising an outer bottom panel having a pair of outer side panels hingedly connected to opposite edges thereof and extending vertically upwardly.

Carton With Replaceable End Closures, Salvatore J. Leone and William H. Colgate, Jr. (to The New Haven Board & Carton Co., New Haven, a corporation of Connecticut). U.S. 2,963,214, Dec. 6. A carton with a reclosable cover, which comprises a single blank subdivided by crease lines into front, bottom and back walls and a cover, the back wall being divided by a transverse hinge crease near its upper edge into upper and lower sections and the cover including a top panel hinged to the upper edge of the back wall.

Combined Fitment-Applying and Capping Machine, George H. Dimond (to Consolidated Packaging Machinery Corp., Buffalo, a corporation of New York). U.S. 2,963,837, Dec. 13. A machine for placing fitments onto containers, including means for continuously advancing a series of containers, a supply chute for said fitments and a pivotally mounted structure defining a fitment exit passage arranged in alignment with said chute and projecting downwardly into the path of said advancing containers.

Cap and Plastic Fitment Combination, Edgar J. Heyl and Joseph J. Hitov (to Crown Cork & Seal Co., Baltimore, a corporation of New York). U.S. 2,964,208, Dec. 13. The combination of a container having a mouth, a closure for said container mouth, and a plastic fitment adapted to be engaged by said closure for insertion into said mouth by said closure upon application of said closure to said mouth.

Longitudinal Side-Opening Carton and Blank Therefor, Harold G. Hanselman, Jr. and Patrick L. Bundy (to Michigan Carton Co., Battle Creek, a corporation of Michigan). U.S. 2,964,231, Dec. 13. A front-opening carton of paperboard or similar relatively rigid material, comprising an elongated rectangular back wall panel having a longitudinal hinge line.

Closure for Containers, Frederick M. Lipman (to Charles Marchand Co., New York, a corporation of Delaware). U.S. 2,965,257, Dec. 20. A container closure including in combination a top sealing portion, a cylindrical skirt depending from the top sealing portion, screw threads on the interior wall of said skirt, and a plurality of inclined ramp members carried on the inner surface of said top sealing portion.

Gravity-Feed Package-Merchandising Machine, Harry G. Du Bois (to Rowe Manufacturing Co., Whippany, N.J., a corporation of New Jersey). U.S. 2,965,262, Dec. 20. A machine for dispensing cartons including in combination a platform having a surface for supporting a plurality of cartons to be dispensed, said supporting surface lying in a plane.

Packing and Dispensing Means for Plastic Film, John Williamson, Laurence R. Klepper and Leon Brink (to National Distillers & Chemical Corp., New York, a corporation of Virginia). U.S. 2,965,272, Dec. 20. A carton for shipping and dispensing rolled sheet material, said carton comprising continuous front, back and end wall portions, one of said end wall portions having a free vertically disposed edge, means for securing said free edge to the adjacent edge of the back wall portion of the carton.

Compartmented Carton, Lawrence H. Phillips (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,965,278, Dec. 20. A collapsible compartmented carton for separably containing a plurality of articles, formed of a one-piece blank of suitable sheet material such as foldable paperboard.

Method of Securing Rigid Shoulder Members to Collapsible Containers or Tubes, Theodore Loew (to Victor Industries Corp., Greenwich, Conn., a corporation of Delaware). U.S. 2,965,964, Dec. 27. The method of securing a tubular section of plastic material within an annular groove in a rigid shoulder member (said groove being defined by an inner and an outer edge portion), which consists of the steps of inserting the tubing directly into the annular groove.

Apparatus for Forming, Filling, Sealing and Severing Containers, George William Lane and John Gayle Sawicki (to Liqua-Pak, Inc., Omaha, a corporation of Nebraska). U.S. 2,966,021, Dec. 27. In an apparatus for forming and filling containers using tubular starting material, the combination comprising two pairs of endless chain assemblies arranged around the tubular material at right angles to one another.

Carton-Erecting and Expanding Mechanism, Harry E. Engleson and Elmer D. Sramek (to F. B. Redington Co., Bellwood, Ill., a corporation of Delaware). U.S. 2,966,100, Dec. 27. In a machine for opening cartons from the flat, a magazine for holding collapsed cartons, means for feeding one carton at a time from the magazine to an opening station, a stop at said station for engaging the leading edge of the collapsed carton and a mechanism for opening the carton.

Can with Telescopic Cover and Method of Making Same, William F. J. Fienup (to R. C. Can Co., Overland, Mo., a corporation of Missouri). U.S. 2,966,101, Dec. 27. The method of manufacturing a paper tube with a telescoping section, comprising the steps of suc-

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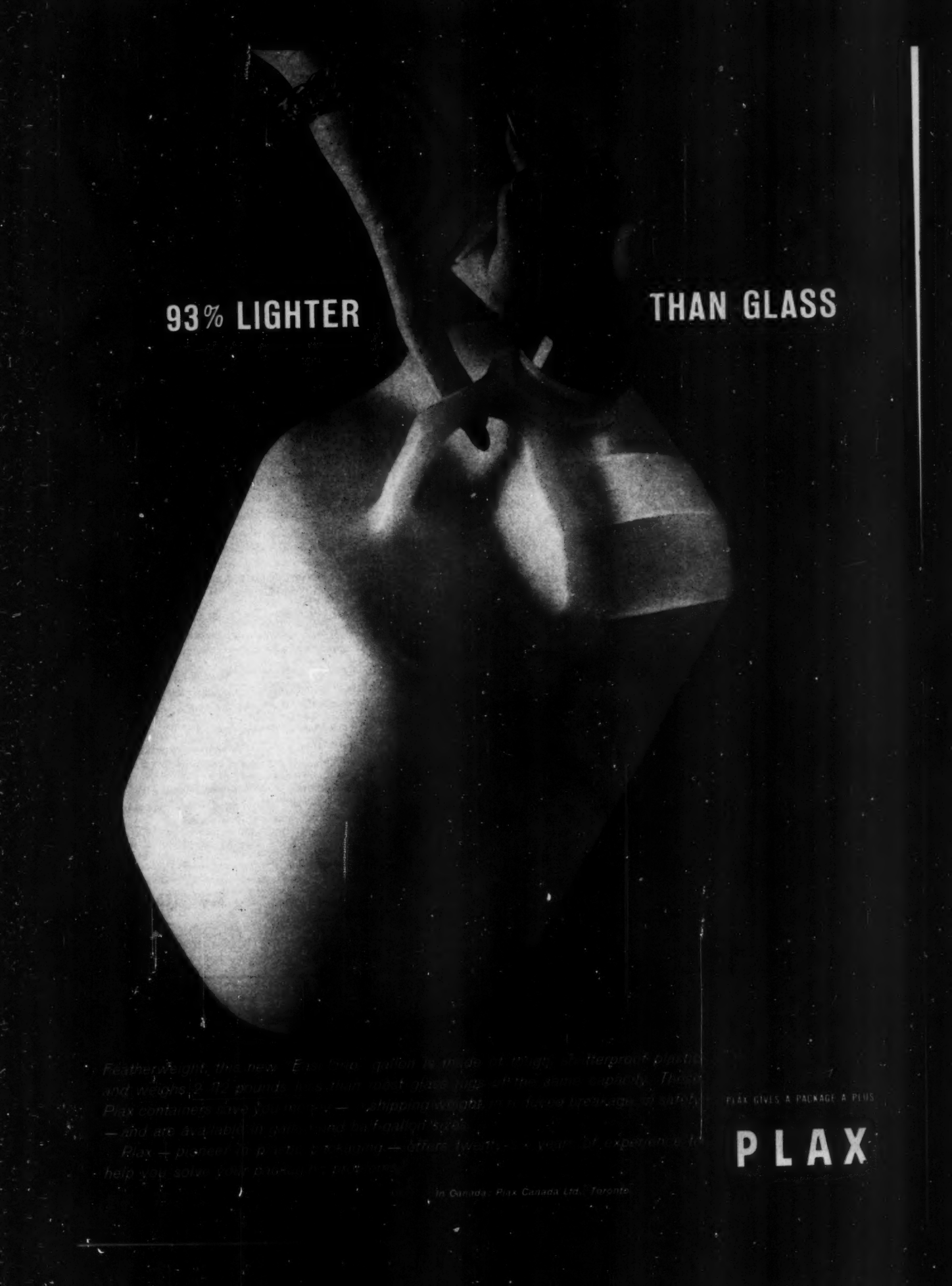

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Patents [*Continued*]

cessively winding a plurality of paper tapes in a spiral manner to form a multi-ply tube.

Dispensing Package for Fluids, William Geisler (to Wilbro Corp., Maywood, N.J., a corporation of New Jersey). U.S. 2,966,282, Dec. 27. In a container of the class described, the combination of an outer rigid wall structure comprising metal end walls and paper side walls, one of said end walls having an opening therein, a neck member having a passage extending therethrough mounted in the opening in said one end wall.

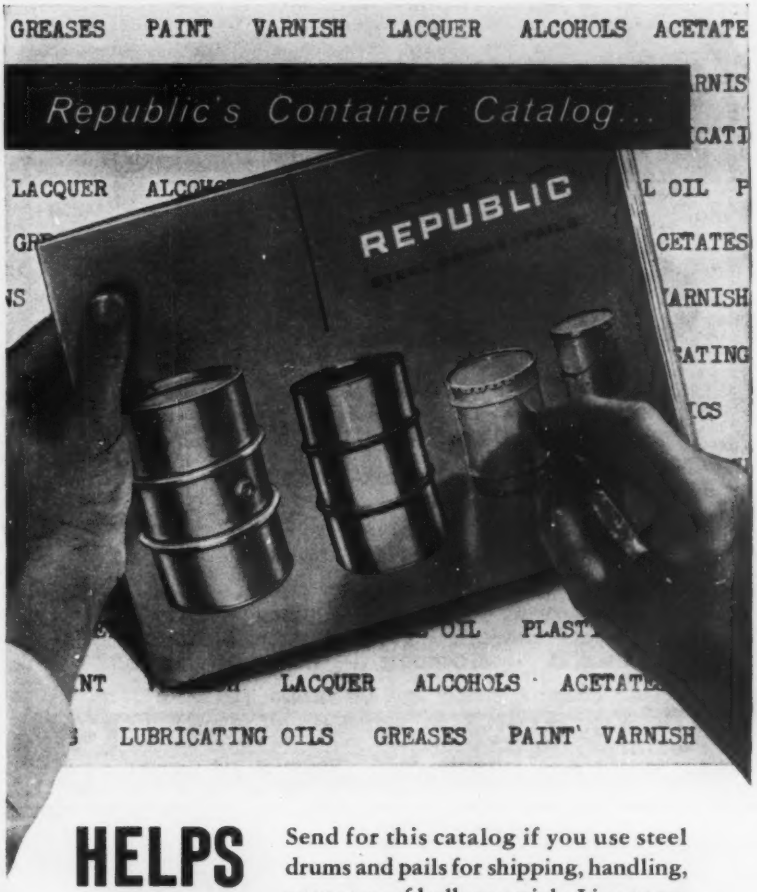
Paperboard Box, Morton Goldsholl, Chicago. U.S. 2,966,293, Dec. 27. A one-piece carton blank for a box, comprising adjacent panels of approximately the same size and shape, each having straight parallel opposite sides in alignment with the corresponding sides of the other panel and adapted to form outwardly-bowed box side walls meeting along said parallel sides.

Closure Assembly for Fibre Containers, Herbert L. Carpenter and Herbert L. Carpenter, Jr. (to The Grief Bros. Cooperage Corp., Delaware, O., a corporation of Delaware). U.S. 2,966,378, Dec. 27. A locking rim for a container, comprising in combination: a split rim lying in a plane and being cooperable to extend circumferentially around a container, and said split rim being provided with two end portions positioned substantially adjacent each other.

Carrier for Circular Articles, Don N. Swenson (to United States Steel Corp., Pittsburgh, a corporation of New Jersey). U.S. 2,966,380, Dec. 27. A carrier comprising a circular base plate, diametrically opposed arcuate flanges fixed to circumference of said base plate and projecting therefrom, the remainder of the circumference of said base plate between said flanges being unobstructed to enable the base plate—when lying vertically—to move into abutting relation with the end face of a cylindrical article which rests on its circumferential face.

Jewel Box, William L. Gross (to Bond Street Jewel Case Corp., New York, a corporation of New York). U.S. 2,966,386, Dec. 27. A jewel box comprising an upright container portion, said container portion having a base, a top parallel to said base, a vertical back and a plurality of vertical sides, said container portion having a single upright opening defined by the top, sides and base of said container portion, said opening being angularly disposed in respect to the vertical.

Plastic Film Bag and Method of Filling the Same, William B. Foster, Minneapolis. U.S. 2,966,414, Dec. 27. The method of packaging dressed fowl which comprises providing an elastic plastic film bag with an opened end and tapered closed end of generally parabolic contour, then drawing the bag over the article and simultaneously mechanically forcing out the air in the tapered end of the bag and from around the fowl by stretching the bag laterally and longitudinally over the fowl until it is compressed to rotund form with the hocks and wings tightly against the body of the fowl and the plastic film bag positioned skintight thereon.



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The Bulk Packaging & Containerization Institute held its organization meeting recently at the Statler-Hilton Hotel in New York. Reflecting growing interest in this area of packaging, BCPI is designed to act as a clearing house for containerization and bulk-packaging specifications.

The association will deal primarily with new concepts in shipping containers and shipping practices. Among its long-range objectives are: to collect and disseminate information relating to bulk packaging, transportation and marketing of the products of industry, agriculture and mining; to promote activities calculated to enable shippers and carriers to conduct their operations with greater economy and efficiency, and to aid in the development of industry standards.

Glenn Mather, former managing director of the Fibre Drum Mfrs. Institute (now dissolved), is managing director of the association. ●

New stress-flex tester

[*Continued from page 126*]

be accurately ascertained and controlled throughout the entire test cycle. Stress-flex values increase rapidly as cellophane moisture content is raised. (See Figure 6.)

For this reason, great care should be taken to condition stress-flex test samples properly. Test samples should be hung individually in a controlled-humidity room until the moisture content of the film is at equilibrium with the selected relative humidity. Normally, MSD cellophanes require 48 hrs. to reach equilibrium moisture content, while polymer-coated "K" cellophanes require 10 days. This conditioning time can vary slightly, depending on such factors as the amount of air circulation and temperature.

It has been observed that contaminants on the surface of a test sample distort stress-flex values markedly. Dusting an uncoated (PD) cellophane with talcum powder or coating it with oil increases its stress-flex value as much as seven times that of untreated samples. Therefore, great care should be taken in conducting this test to assure that the samples are completely free of contamination.

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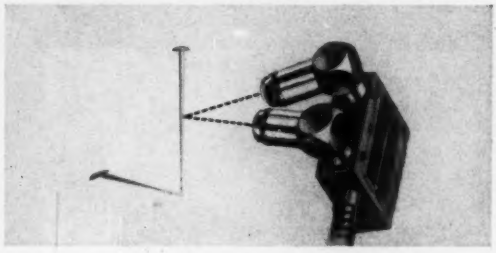

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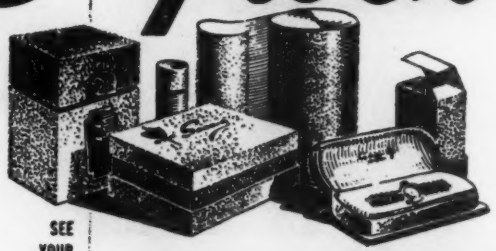

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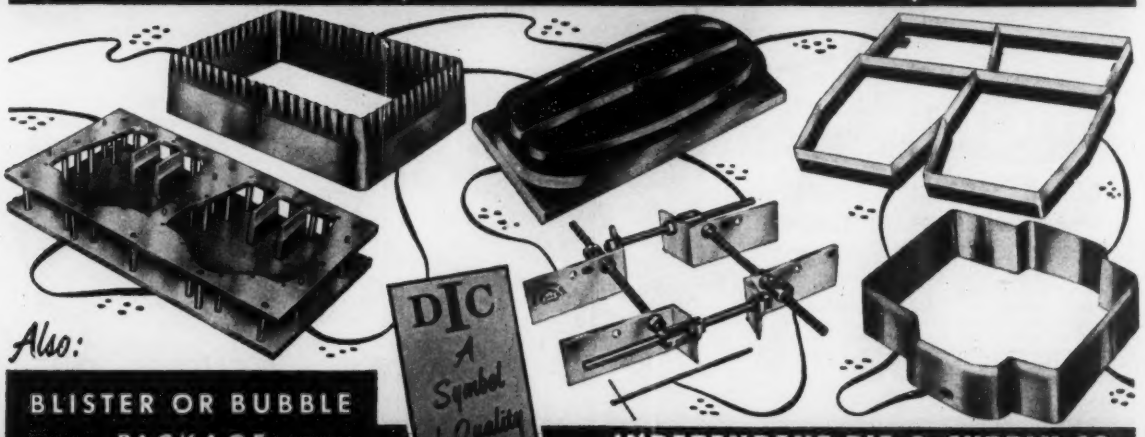

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flex test differentiates successfully between durability differences not readily discernible by other testing techniques lies in the fact that it is much more sensitive to subtle differences in film properties. For this reason, there is a corresponding increase in the spread of individual results. In order, therefore, to obtain results that are statistically significant, it is necessary to use a correspondingly large number of samples. This number will depend, of course, on the degree of accuracy required, the specific films under test and the test conditions.

Correlation of test data

The ability of the low-temperature stress-flex test to correlate with actual commercial field performance was demonstrated in a series of tests conducted during winter weather.

In these tests, the standard 300 MSD cellophane was compared with an experimental version of this same film type which was felt to have improved durability characteristics. Although other physical-test procedures were used to compare these films, the low-temperature stress-flex test was appreciably more sensitive and indicated that a rather substantial difference existed between the two films. The experimental film had an average low-temperature stress-flex value of 55, compared with an average of 16 for standard film[3].

In order to assess fully the practical commercial significance of a difference in stress-flex values of this magnitude, a controlled shipping test using commercially prepared duplex bags of each of these films was conducted. Both of the films were subjected to normal handling in printing, bag fabrication, as well as in loading.

Four different products were used in this comparison: 11 oz. of peanut logs, 8 oz. of cookies, 1 lb. of jelly eggs, and 7 oz. of twist pretzels. The cartons were packed so that each contained an equal number of standard and experimental bags. They were then stored for three weeks at 20% relative humidity, 72 deg. F., overwrapped in a moisture-barrier film and stored at zero deg. F. for three days prior to being shipped on a pre-arranged standard rail-truck shipping route

[3]These tests were conducted at 32 deg. F. on samples previously conditioned at 35% relative humidity. A total of 880 samples per film type was used for this comparison.

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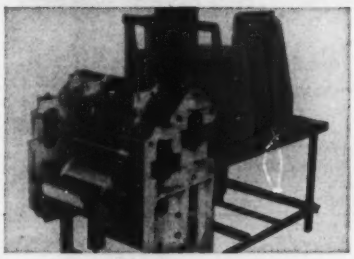

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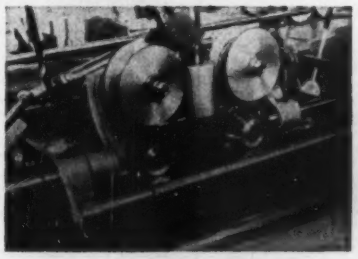

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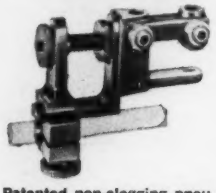

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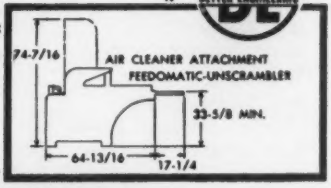

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involving a minimum of 26 transfer points. These shipping tests were conducted during the months of January and February.

In order to achieve a level of breakage sufficient for comparison purposes, the above test procedure was repeated twice and, in addition, all units were subjected to a combination of drop and vibration tests at zero deg. F. The results of these tests, shown in Table II, corroborated the differences in low-temperature stress-flex test results and confirmed the relationship between laboratory testing and field performance of the films.

Subsequent testing has indicated that this relationship carries through to laboratory bag-drop tests. In later testing, standard and experimental films were made into bags on a laboratory machine and conditioned to moisture equilibrium at 35% relative humidity. The bags were filled with a simulated product and packed into shipping cases so that each bag would receive equal treatment. Storage was at 32 deg. F. Overnight and frequent drops on a steel plate completed the test. The results again corroborated the stress-flex results and confirmed the relationship between stress-flex test results and package performance. (See Tables III, IV and V.)

Conclusion

The stress-flex tester represents a major step toward providing a laboratory tool for predicting the commercial durability performance of a film type. However, the interpretation and intelligent application of stress-flex data require a thorough knowledge of all the factors affecting both the test itself and the durability performance of a flexible film.

Acknowledgments

It would be impossible to acknowledge the contributions of all individuals associated with the development of the stress-flex test by Du Pont. Specific recognition, however, should be given to W. J. Donehower, who conceived the test principles, and to J. D. Alderman, who designed and built the first stress-flex machine.

References

1. Simril, V. L., and Flierl, D. W., "Predicting Film Durability," MODERN PACKAGING 25, No. 4, Dec., 1951, pp. 130-134, 176, 178. ●

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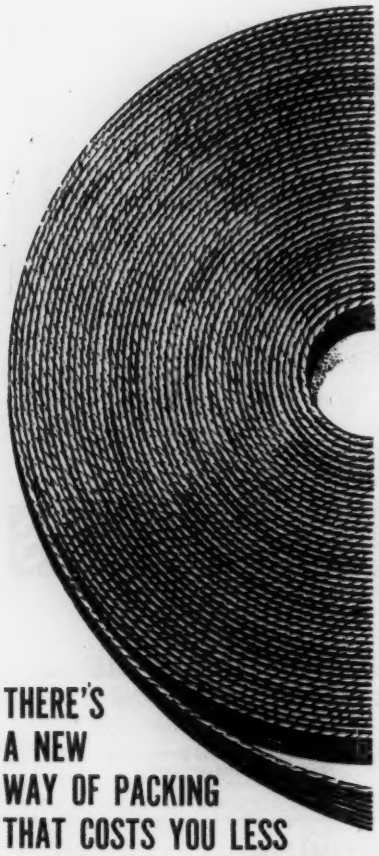
- ☐ Name Plates with Girder Adhesives, Heat-Activated Gutta Percha-Permanent & Pressure Sensitive



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Prices of plastic resins settle back

Two major companies that recently raised prices of polyethylene and polystyrene resins have returned to the lower figures, which now prevail in the current volatile plastics market, when competitors failed to go along with the price boosts. And two other plastics, rubber hydrochloride and acetal resins, have also achieved substantial price reductions.

Du Pont, which recently upped the price of conventional low-density polyethylene resin from 27½ to 30 cents per pound, withdrew the increase when Union Carbide Plastics Co. and other competitors decided to maintain the present price. Du Pont had justified the increase because of rising production costs and greater expenditures for product and market development. Union Carbide, in a letter to customers, took the position that the current price and long-range plans for broadening polyethylene markets were the best ways to increase usage. The last major drop in polyethylene prices, from 32½ to 27½ cents per pound, was initiated by Union Carbide in August, 1960, and was immediately followed by the other producers.

Much the same situation prevails in the polystyrene field. Last November, Foster Grant cut the price of general-purpose polystyrene crystals from 21½ to 19 cents. Other manufacturers followed and went even further until the price had slipped to 18 cents. Recently, Dow announced a rise in price to 19 cents, arguing that the rapid price decline could not be justified by improvements in either manufacturing skill or technology. However, 24 days later, Dow "reluctantly" re-established the 18-cent figure in "recognition of the current market." But company spokesmen say that the lower price is "definitely harmful to the future of this key plastic."

While these figures are standard for certain specific resins, the general pricing situation in both polyethylene and polystyrene is complicated by the many different figures that prevail for different grades or mixtures of resins and for purchases in different quantities.

The downward trend in plastics prices has affected other films, too. Goodyear Tire & Rubber Co. has just announced a 10-cent-per-pound reduction in the cost of its BG Pliofilm for bread wraps. This film is now priced at 90 cents per pound (91½ in the West), a reflection, according to the manufacturer, of new economies and efficiencies in film production. A substantial price cut has also been declared by Du-Pont for its "Delrin" acetal resin, which is cut from 80 to 65 cents per pound in truckload quantities. In only one year, this new injection-molded material has dropped in three stages from an introductory price of 95 cents per pound to the present low. ●

Canners weigh steel vs. aluminum

The growing battle between producers of tinplate and aluminum for control of sizable markets in frozen citrus concentrates and heat-processed seafoods came into the open at the recent annual meeting of the National Canners Assn. in Chicago. The conflict, which may broaden to other areas of packaging, is also of major importance to oil packagers who have been weighing and testing the advantages of steel versus aluminum for several years.

Heretofore, steel manufacturers have made no move to counter the aggressive attempts of aluminum companies to corner a piece of the metal-can market—even after 30% of retail oil containers had switched to the light metal. However, the rapid progress of aluminum in the citrus-concentrate industry—where aluminum men claim they will have 60% of the cans this year—has spurred steel companies into development of less expensive, much thinner and lighter-plated steels, called double-reduced tinplate, which it is hoped will reverse the trend in both oil and citrus.

It is significant that can manufacturers, who have long wanted a choice of raw materials for their containers, have taken no sides in the battle and are working extensively with both aluminum and lightweight tinplate.

At the canners' meeting, steel men made every effort to sell the advantage of low price for the new tinplate, which is reportedly $6 per base box in 55-lb. weight with an additional 36 cents required for delivery and scrap adjustment, making

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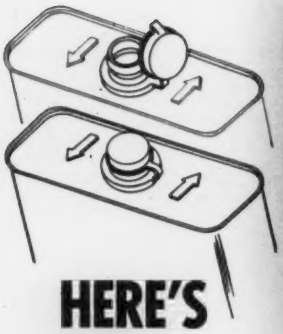
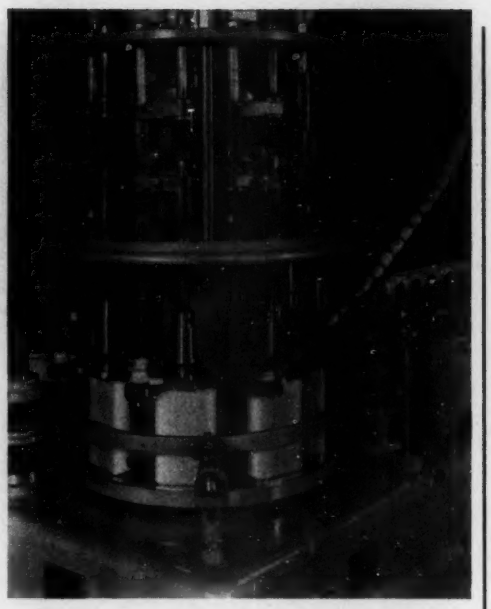
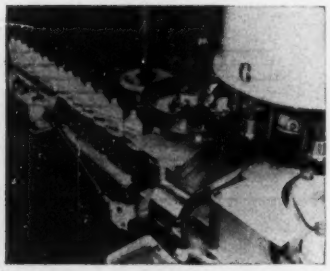




HERE'S BEST WAY TO APPLY THE NEW PLASTIC "FLIP CAPS"

Plastic "Flip Caps" give the new 1961 look to both "F" and "I" type cans. Consolidated has perfected the dependable, fully automatic method for applying these new plastic closures which replace the soldered screw-neck nozzles which have been in use for over 25 years.

The new D8-FS Consolidated Capper is available in models with 2 to 8 spindles and with capacities from 40 to 250 containers per minute. The plastic fitments with *captive plastic caps* are fed from a hopper and inserted by straight down pressure rather than rotary screw motion previously used on metal screw caps. Caps are oriented with hinge strap parallel to length of can. Cost-consuming soldering is eliminated by the neckless can — your packages are up-dated for increased consumer appeal. Consumers prefer this type cap because of convenience of handling. Both quart and pint sizes can be handled with equal ease.



Consolidated D6-F Capper in use at S. C. Johnson & Co. applying plastic screw-type closures with captive caps to plastic containers. The new design, adjustable tension grips hold plastic containers firmly without collapsing them. Capacity 120 containers per minute.

For complete information about this most modern equipment for applying these most modern caps, write today.

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it more than $1 per box lower than aluminum stock as now being used, for example, in citrus cans. Standard 75-lb. tinplate sells from $7.79 (coils) to $8.31 (sheets) per base box. Steel companies claim that big shipments of the new tinplate are being made to Florida can-making plants and that oil companies are changing back to tinplate at the lower weight. However, no lids have yet been made from the lighter stock (these are stamped from conventional 75-lb. plate) and can makers report some problems in fabricating cans from the thinner material and in running these cans on universal double-seaming machines.

Aluminum makers, on the other hand, also appeared very confident, citing their sweeping gains in concentrate and oil, and announcing immediate plans to penetrate the field of heat-processed seafoods with a new type of two-piece shallow-drawn aluminum can made from pre-enameled coil stock. It is said to be lower in cost than conventional three-piece tinplate cans for such products as tuna fish and shrimp.

Aluminum suppliers also claim that their 8-mil aluminum alloy for citrus cans, now priced at $7.47 to $7.84 per base box, saves more money in shipping weight than the lightweight tinplate and that new aluminum plate with a smoother finish will obviate the need for enamel coatings, used now to provide lubricity in can making. Such coil-stock plate, according to these experts, will enable aluminum cans to be priced the same or even lower than the lightweight tin cans.

Indications are that the aluminum industry would not regret losing the motor-oil can market, which they regard as uneconomic for them. But the opinion was expressed that, ultimately, the most economical can for oil will have a lightweight tinplate body and aluminum ends. If such a container were universally adopted for motor oil, more aluminum would be used in ends alone than is presently consumed by this product in complete cans.

Meanwhile, motor-oil packagers and their container suppliers are keeping an eye on the invasion of this field by rigid high-density polyethylene, which could complicate the situation further. A major Canadian oil company is reported to be the first user (see this issue, p. 94). ●

Faster Flexoprinter has new design to beat vibration

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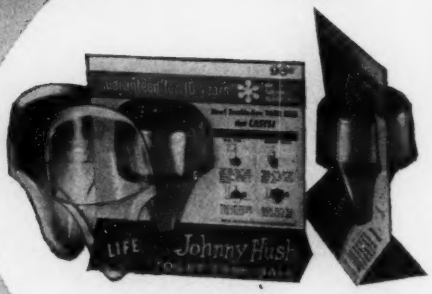

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Hardware exposition

Plans are well under way for the first Hardware Packaging Exposition, to be held in conjunction with the National Hardware Show, Oct. 2-6, in Chicago's new McCormick Place. Premium display space has been donated for the exposition by management of the show, which is expected to attract thousands of hardware wholesalers and retailers. The Packaging Institute's Hardware Packaging Committee, sponsor of the event, hopes to obtain seniors and graduate students at Michigan State University's School of Packaging to man the exhibits and answer visitors' packaging questions.

Awards will be given in 11 hardware packaging categories—builders' hardware, general hardware, lawn equipment and chemicals, hand and power tools, cleaning and laundry supplies, giftwares, paints, plumbing and electrical supplies, sporting goods, farm supplies, and miscellaneous. One entry in each category will receive a first award. Two honorable mentions will be awarded in each category. There will be no "best of show" selection.

General requirements are: (1) packages must have been in distribution for 90 days prior to Aug. 15, 1961, and must be single selling units only; (2) a handling fee of $20 must accompany each entry; (3) each entry must be accompanied by an official entry blank (available from PI), a catalog sheet showing dimensions and a brief outline by the packager of the specific objectives of the package.

Awards will be judged on the basis of construction, technical excellence, functional features, imaginative uses of new materials and concepts, merchandising aspects. ●

Sounding Board

[*Continued from page 57*]

Depending upon the nature of the problem, it is my habit to select the locations of the manufacturers who I know make the specific type of package or kind of material in which I am interested. Upon completing my calls at the various companies' booths, I then set out to observe the entire show.

I find it just as important to view the entire exhibit as to call on the specific companies I know might be able to help me. Invariably, by in-

specting the entire exhibit, I find new sources of assistance from companies I discover for the first time at the show, as well as assistance from new developments or new divisions of other companies that represent advances made since the preceding year's show.

To the best of my ability, I see every exhibit at the Packaging Show each year. However, like many interested attendants, it is not always possible for me to arrive at the show during the first days. On occasion, I am present only during the final day of the show and, although this is a scheduled showing day for the exhibitors, I find that the exhibits, in many instances, close down long before the official closing hour.

In this way, I believe the exhibitors short-change themselves, for they prevent the late comer from seeing all of the exhibits and in some cases, specific exhibits they had in mind. I have found this very disappointing in the past. It can make the difference between a success or a failure of the visit of a packager to the show.

Arthur C. Fritog, *Product Director, Tek Hughes, Metuchen, N.J.:* Primarily, I will plan to spend enough time to see the show in total. I feel that one of the greatest injustices to my company, myself and the exhibitors who have exerted a great deal of planning time to insure that their best efforts and ideas are presented for the education of those in attendance is to take the time and trouble to go to the show and then not see it all.

First, I walk through the entire show and see every booth, noting those of interest to return to. I have often seen items of particular interest to our own packaging problems that I never would have dreamed possible from such a large and varied list of exhibitors.

I make sure I have a "brainstorming" mind while touring the exhibits. An exhibitor cannot be expected to know by looking at you or your badge what your particular packaging needs are. But with questioning as to the capabilities of his products or facilities, some "way-out" thinking may be crystallized to produce results that will bring a product from mediocrity to a really fine package. This is one place where I let imagination be the key. ●

Marking Ideas for People who Package . . . No. 5
from GOTTSCHO

PERKS UP COFFEE PACKING

Martinson's Coffee, Inc. is famous for two fine brands—Aborn's and Martinson's, both of which are supplied in portion-packed cellophane pouches to the hotel and restau-

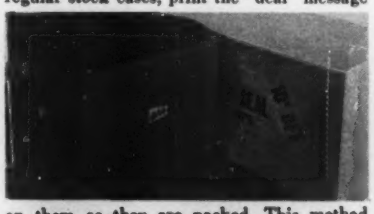
rant trade as well as in standard consumer packages. It should be equally famous for the extremely flexible packaging operation in which 5 double-tube filling and pouch-making machines (Stokeswrap and Transwrap) are employed interchangeably to produce its commercial packs. Key to the operation's efficiency and simplicity are 10 *"700 Rolaprinter"*® units (2 on each machine) and use of plain unprinted cellophane. Thus, whenever company switches over from Aborn's to Martinson's, or from "fancy" to "regular" grade coffees, it also substitutes appropriate *"Rolaplate"* diewheels in the *"Rolaprinters."* These compact automatic attachments print the *complete* copy—brand name, descriptive copy, weight and code—in a carefully planned repeat pattern on the web as it feeds into the filling section. Use of white ink gives excellent contrast of printing against the rich dark coffee background. (E-1)

Package Marking "Show"-Case

Half a dozen brand new imprinting machine developments will be unveiled by Gottscho at the upcoming "Packaging Show" in Chicago, April 10th to 13th. These are in addition to a veritable 3-ring circus where you can see our complete line of streamlined package coders and imprinters go through their paces in 3-dimensional, full-color, live action. Make it a point to visit us at the show—Booth 821—to see all that's new and best in modern package imprinting methods. For "Advanced Registration Card" check E-2 below.

IT'S A DEAL

When you run a special price, premium or similar "deal" you probably pull out all the stops to promote it, including use of the shipping case as a vehicle for calling attention to your offer. Instead of buying specially printed cases for such promotions, many companies find it more advantageous to use regular stock cases, print the "deal" message



on them as they are packed. This method keeps inventories in line, eliminates problem of delayed deliveries from boxmaker, saves printing costs. Depending on situation, any of three machines can be used for the purpose—*"Rolacoder"* or *"790 Rolaprinter"* conveyor imprinting attachments, or *"Markoprinter"*® in-plant case-printer. (E-3)

"SECRETS" FOR THE ASKING

"Secrets of Production-Line Imprinting," 8-page reprint of an article in 1960 "Good Packaging Yearbook," contains much information about package imprinting practices in various industries. A copy is available free, while the supply lasts, by checking the appropriate box on coupon below. (E-4)

PRACTICAL PRE-PRICING

The trend towards price-marking consumer products at the manufacturing level is on the upswing. And more and more companies, following the trend, are finding inexpensive and efficient methods of applying prices on their products at the time they are packed. A number of manufacturers, for instance, are now imprinting their cartons with the price

as part of the cartoning operation. New *"1270 and 1280 Rolaprinters,"* attached to automatic cartoners, apply the price to carton flaps immediately prior to tucking. The *"1270"* prints from above, the *"1280"* from below. Both fit in idle space, are fully automatic, adjustable for different carton sizes, and permit almost instant changeover to new price legends. They can be used to imprint carton bodies as well as flaps with varieties, brands, codes in addition to prices. (E-5)

TINY NEW CODER

A neat little coding attachment for conveyors and carton-handling machines—less than 7½" long overall, less than 2½" high—is the latest new development to join our line of popular *"Rolacoder"* friction-drive imprinters. Tiny coder imprints a continuous or random mark that repeats every 9", or less if desired . . . is designed to mark shelf cartons, boxes, cases, cans, paperboard containers, etc. . . . features *"Metalok"*® type-holding base and choice of *"Magic Inking Roller"* or liquid ink reservoir. (E-6)

MAKES HARD JOB EASY

To make a really clean, legible and permanent mark on the bottom of a jar, can or bottle—at high production speeds—is one thing. To do it on a deeply *recessed* bottom—and do it consistently regardless of variations in depth of recess product-to-product—is another. The Beacon Wax can with its special cap-accommodating recess is an excellent example of such "hard-to-mark" products. It takes a *"TB Markocoder"*® to do the job. This widely used line attachment is a natural for imprinting stack-type, aerosol and other recessed bottom containers as well as flat or flush bottoms. And, what's more, you do not have to cut into your line or employ troublesome dead plates with the *"TB Markocoder."* (E-7)

Want more info? Check off—clip—attach to your letterhead—and mail to

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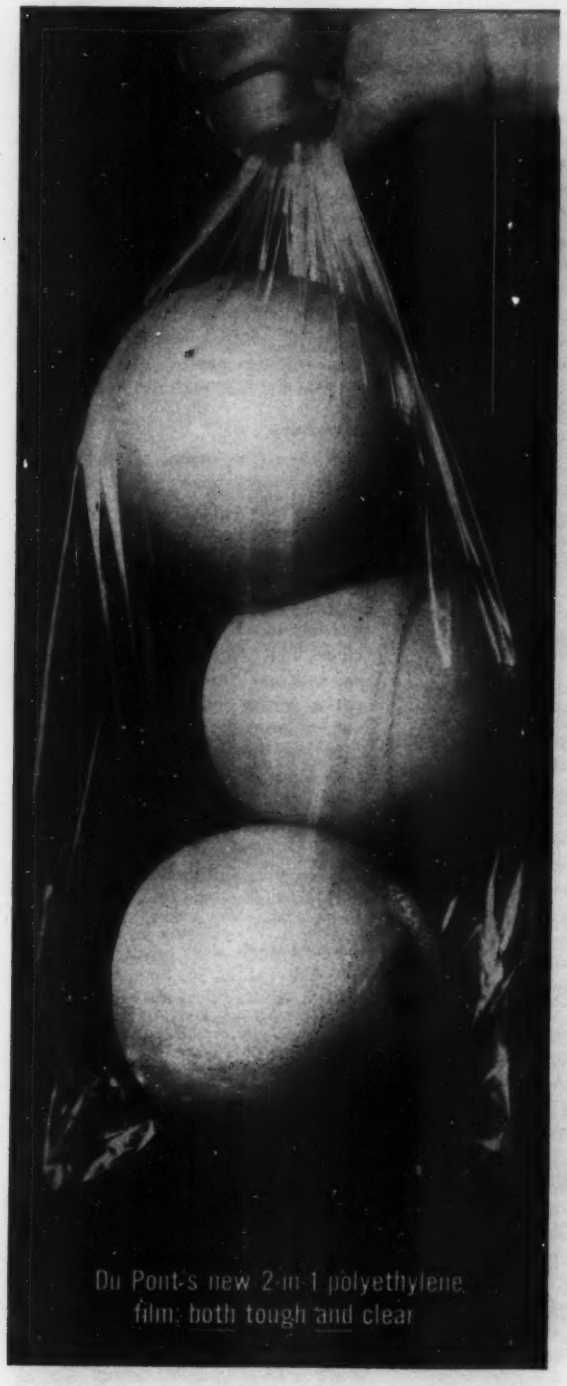

Du Pont's new 2-in-1 polyethylene film: both tough and clear

Competitive polyethylene film—tough but hazy

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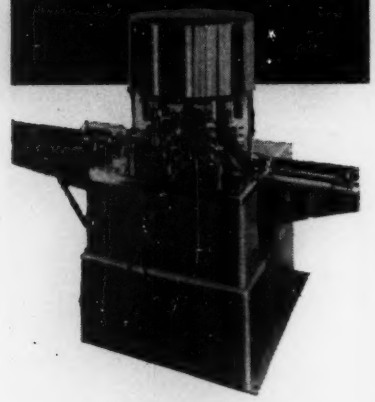

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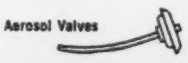

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Diamond 2-3884

New polymer-coated polyethylene

[*Continued from page 130*]

when handled, while those packaged in conventional polyethylene became increasingly cloudy and dull.

Applications

Use evaluation tests have been conducted on a variety of products, such as hard and soft candies, dried milk, cake mixes and icings, oil-coated metal parts, popcorn-fat packages, oil-impregnated cloths, salted mixed nuts, dried fruit and potato chips. Other possible applications include sliced cheese in semi-vacuum or gas-filled packages, butter rolls, soft cookies and soft goods.

Candy packaging. Both soft candy (gum drops) and hard candy (lemon drops) coated with sugar crystals were packaged in several kinds of films: coated polyethylene, saran, cellophane and uncoated polyethylene. These samples were stored at 100 deg. F./90% relative humidity, 75 deg. F./81% relative humidity and 75 deg. F./15% relative humidity. At the latter condition, the coated-polyethylene packages of gum drops were clearer and more attractive than were the regular-polyethylene packages. The sugar crystals did not cloud or mar the coated polyethylene as they did the plain polyethylene (Figure 2). Though the saran bags remained clear, the sugar crystals stuck to the soft film.

After three months' storage at 75 deg. F./81% relative humidity, the coated-polyethylene packages of gum drops were judged salable, whereas the cellophane packages showed some dissolving of sugar and loss of flavor. None of the gum-drop samples was classed as salable after storage for two months at 100 deg. F./90% relative humidity.

Tests with lemon drops at 75 deg. F./81% relative humidity showed that those packaged in coated polyethylene were salable, whereas the candy in cellophane, saran and polyethylene were not. The data are presented in Figure 3.

Packaging of potato chips. Potato chips packaged in coated polyethylene bags and in standard commercial double-walled cellophane bags were stored at 100 deg. F./90% relative humidity and at ambient conditions exposed to light and in the dark. The chips were then sampled and checked for weight change, crispness and for rancidity.

The shelf life of potato chips packaged in coated polyethylene was equal to that of the chips in the double-walled cellophane bags at all test conditions.

Packaging of nuts. Samples of cashew nuts were packaged in 1.7-mil coated polyethylene and in 1.5-mil saran. Measurements of weight change for 30 days at 80 deg. F. and 80% relative humidity, 75 deg. F. and 35% relative humidity, 75 deg. F. and 17% relative humidity, and at 103 deg. F. and 3% relative humidity showed the coated polyethylene and 1.5-mil saran to be equal in protective quality. Taste, odor and freshness were also identical. The eye appeal of the nuts was better in coated polyethylene because of the greater clarity and gloss of the film package.

Summary

A new packaging film, Olin Coated Polyethylene, is now available, but in limited quantities for some time to come. It is being used successfully in applications where the previous limitations of uncoated polyethylene were found to be unsatisfactory. These applications include high water-vapor protection, reduced gas transmission and superior grease, oil and odor resistance. Converting- and packaging-machine operation is satisfactory, with both sides of the film being printable and heat or adhesive sealable. Package appearance is excellent because of the sparkling transparency, surface gloss and resistance to damage in handling the film.

References

1. Kelly, M. E., Jr., Roth, S. F., and Bailey, H. R., "Saran-Coated Films." MODERN PACKAGING *30*, No. 10, 151 (June, 1957).

2. Hartshorne, E., and Simerl, L. E., "A New Polymer-Coated Cellophane," MODERN PACKAGING *29*, No. 5, 139 (Jan., 1956).

3. Zerbe, S. A., "Packaging Machinery Advances for Polyethylene," presented at the Western New England Regional Technical Conference, Society of Plastics Engineers, Hartford, Conn., Oct. 1, 1958.

4. Aggarwal, S. L., and Sweeting, O. J., "Polyethylene: Preparation, Structure, and Properties," *Chem. Revs. 57*, 665 (Aug., 1957). ●

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RIBBON DATER. Illustrated specification sheet describes automatic ribbon code dater that offers speeds up to 300 per min., depending upon application. Imprint area—from 1/16th in. to 1/4th in. high, up to 1 in. long on standard models. Other advantages include no ink, no clean-up, high efficiency. Norwood Marking & Equipment Co. (150-C)

PACKAGING. Illustrated folder describes services of company that offers complete packaging services. Includes discussion of Christmas overwraps, and laminating. Kehr Products Co. (151-C)

MACHINE PROCESSED PAPERS. Indexed sample book describes new machine process paper made from strong base stock—ideally suited for machine forming operations. Provides high gloss without excessive surface slip. Other advantages, descriptions of patterns, available in 10 colors. Thilmany Pulp & Paper Co. (152-C)

HIGH GLOSS PAPERS. Sample book illustrates high gloss papers suitable for box covering, display and label work, etc. Available plain or embossed, in 26 in. or 30 in. rolls. Prices included. Matthias Paper Corp. (153-C)

CELLOPHANE. 20-page illustrated book tells in picture-story form activities of leading manufacturer of cellophane. Discusses manufacture of cellophane, uses, characteristics, etc. Includes interesting history of cellophane. American Viscose Corp. (154-C)

PRE-SHIPMENT TESTING. 4-page illustrated folder describes various tests used to insure safe arrival of any packaged product. Tests are conducted according to standards established by the National Safe Transit Committee. Crown Zellerbach Corp., Gaylord Container Div. (155-C)

FILMS & SHEETS. 10-page illustrated book tells in picture-story form about production of thermoplastic films and sheets. Covers casting, pelletizing, extruding. Discusses applications. Also includes detailed technical data. Joseph Davis Plastics Co. (156-C)

CARTONS. 12-page illustrated booklet describes equipment that sets up 6 to 16 oz. carriers—up to 60 carriers per minute automatically. Covers how to start setting up, operating cycle, maintenance. Complete descriptions, detailed drawings, other data. Diamond National Corp., Gardner Div. (157-C)

STOCK BAGS. 18-page illustrated brochure describes cellophane and polyethylene flat bags . . . flat bags for textiles . . . flat pouches . . . satchel bottom bags of cellophane . . . square bags, etc. Descriptions, sizes, other data. The Dobeckmun Co. (158-C)

WOODGRAIN PAPERS. Folder with samples describes line of woodgrain papers that are authentic reproductions of natural wood grains. Gravure printed, soil-resistant. Available in 26 in. and 30 in. rolls; special widths up to 52 in. Fitchburg Paper Co., Decotone Products Div. (159-C)

PORCELAIN METALWARE. 12-page illustrated catalog describes line of imported decorated and embossed porcelain metalware. Containers, tea caddies, cookie jars, utility boxes, tote trays, etc. Descriptions, unit dimensions, internal dimensions. The Daher Co., Inc. (160-C)

AEROSOLS. 22-page aerosol market report discusses current aerosol situation. Includes development of the market, expansion of the market, total dollar markets, etc. Discusses insecticides, room deodorants, waxes and polishes, among others. E. I. du Pont de Nemours & Co. Inc. (161-C)

LABELS. Folder and assorted brochures describe complete line of labels—including spot carbon labels, caution labels, shipping labels. Fact-filled article on how labels are designed and made included also. Ever Ready Label Corp. (162-C)

INSPECTION SCALES. Two illustrated specification sheets describe inspection scales with dual calibrations that speed up inspection of predetermined weight commodities. Fractional ounce side; decimal pound side. Complete description, specifications, dimensions. The Exact Weight Scale Co. (163-C)

PACKAGING, DUNNAGE. 4-page illustrated folder describes resilient padding material fabricated of very fine glass fibers, held firmly together with plastic resin. Can be molded to shape, fabricated, cut in the packing department. Advantages include incombustability, resiliency, light weight, etc. Fibrous Glass Products, Inc. (164-C)

VARIABLE SPEED DRIVES. 8-page illustrated book shows where and how to use an infinite range, variable speed drive of high accuracy. Covers principles of operation, advantages, specifications, other data. Graham Transmissions Inc. (165-C)

VIBRATION TEST SURVEY. 6-page binder offers a number of case histories in recent vibration test survey. Covers machine capacity, normal purpose of tester, items tested, general test method and general information. Gaynes Engineering Co. (166-C)

CUSTOM-DESIGN LABELS. 4-page illustrated brochure describes and illustrates line of 20 different pressure-sensitive labels—available with borders printed in gold or silver ink and ready for copy imprint. Five label sizes in each of four shapes: round, oval, square and rectangular. Allen Hollander Co., Inc. (167-C)

STATIC. 4-page illustrated folder describes equipment that improves machine production by eliminating static. Output is smooth and uninterrupted, quality of work is improved. Advantages, technical data and installation information. Herbert Products Inc. (168-C)

CODING, DATING. 8-page illustrated booklet describes line of coding, dating, pricing, imprinting machinery. For automatic imprinting of conveyor-carry cartons and other containers, for high-speed imprinting of cartons, multi-wall bags, wooden shooks; for filled carton imprinting and flexible wraps, etc. Complete descriptions, general information, other data. Industrial Marking Equipment Co., Inc. (169-C)

PLASTIC CONTAINERS. Illustrated, spiral-bound catalog describes complete line of plastic containers including oval, oblong and modified oblong, beveled square, tapered round, cylindrical, Boston-round, stock acid bottles. Also includes plugs and caps. Imco Container Corp. (170-C)

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BALL BEARINGS. 4-page illustrated folder describes complete line of ball bearings that offer reduced weight, size and cost. The Kaydon Engineering Corp. (171-C)

POLYETHYLENE CONTAINERS. 6-page illustrated folder describes line of high density polyethylene containers that are economical, durable, safe and easy to handle. General description. Hydrocarbon Chemicals, Inc., Plastics Div. (172-C)

BALING PRESSES. Illustrated brochure presents features of line of high-speed baling presses. Over 50 models for efficient baling of plastics, paper, light-gauge metals, etc., in bale weights ranging from 50 to over 1500 lbs. Consolidated Baling Machine Co. (173C)

CAR, CEILING LINERS. 4-page illustrated folder describes car and ceiling liners that are easily installed by one man—in a matter of minutes. Make possible conversion of "X" (Rough Freight) cars to "A" (Grain) cars economically and effectively. Kennedy Car Liner & Bag Co., Inc. (174-C)

MARKING DEVICES. 88-page, spiral bound, illustrated catalog describes complete line of marking devices including daters, special inks and pads, numberers, rubber stamps, engraved stencils, automatic coaters, etc. Krengel Mfg. Co., Inc. (175-C)

PLASTIC VIALS, TUBES. 8-page illustrated book describes line of plastic vials and tubes for packaging styptic pencils, tablets, pills, fishing tackle and flies, etc. Lusteroid Container Co., Inc. (176-C)

CARTONING. 4-page illustrated folder describes completely automatic cartoning operation that features wrap-around, sealed carton. Handles candy bars, soap tablets, hardened ice cream bars and slices—other small items wrapped individually or in individual cartons, up to 40 sealed cartons per minute. Lynch Corp. (177-C)

SHIPPING. 16-page illustrated catalog describes complete line of shipping container mounting systems that offer engineered protection against shipping and handling damage. For shipping business machines, cameras, telescopes, jet engines, recorders, television units, etc. Lord Mfg. Co. (178-C)

UNITIZED LOAD HANDLING. 8-page illustrated booklet describes economical method of unitized load handling. Other data. The Mead Corp. (179-C)

PLASTICS IN PACKAGING. 12-page illustrated book covers major package considerations—including merchandising factors, product preservation, direct and indirect costs; packaging costs analysis; the successful package; and the future for plastics in packaging. Monsanto Chemical Co. (180-C)

PACKAGING. Folder and assorted catalog pages include data on foot-operated heat sealer for cellophane and other heat-sealing papers and foils, drum liner—a machine to make large bags out of polyethylene tubing, high speed school feeder, an automatic counter—used for pills, tablets, capsules, etc. Mercury Heat Sealing Equipment Co. (181-C)

STENCILS, TAPE MACHINES. 24-page illustrated book describes complete line of equipment for making stencils, including hand operated and electrically operated stencil cutting machines, fountain brushes, stencil inks. Also covers electric tape machines for sealing cartons. Marsh Stencil Machine Co. (182-C)

MOUNTING, COMBINING, ASSEMBLING. Illustrated folder describes line of mounting, combining and assembling machinery for fast economical production of record jackets, display cards, greeting cards, photo mounts, etc. New Jersey Machine Corp. (183-C)

PLASTIC PACKAGING. 4-page illustrated folder describes custom-formed plastic packaging that can be shaped to almost any product contour. Special mold designs developed for maximum product protection, speedier packing, more effective display—or all three features. The Pantasote Co., Panta-Pak Div. (184-C)

PACKAGING MACHINERY. 32-page illustrated packaging machinery manual is designed for use in conjunction with poly-coated films. Includes information on properties of poly-coated films, specifications and features of various equipment for use in packaging assorted products. Print-A-Tube Co. (185-C)

ADHESIVES. Technical bulletin covers new, improved packaging adhesive especially designed to bind seams and bottom flaps of polyethylene-lined kraft or burlap bags and other containers. Second bulletin describes new, removable labeling adhesive. Rubba Inc. (186-C)

AEROSOL VALVES, CONTAINERS. 16-page illustrated book describes full line of aerosol valves and complete dispensers. Includes valves for metal containers; valves for glass, plastic and small metal containers. Also valve actuators and caps, and complete aerosol dispensers. The Risdon Mfg. Co. (187-C)

BALER BAGGER. 4-page illustrated folder describes baler bags and equipment for filling them. Compared to conventional corrugated shipping containers, baler bags save money, make possible lower freight rates; also far simpler to open and dispose of, far less closure costs, etc. Tele-Sonic Packaging Corp. (189-C)

PACKAGING IDEA KIT. Fully illustrated fact file folder with data sheets contains complete information on latest ideas and methods in skin, blister and flexible film packaging—plus data on plastic blisters and trays, skin pack board and blister card materials. American Packaging Corp. (190-C)

PLASTICS EXTRUDERS. 8-page illustrated booklet describes line of plastics extruders in 3½", 4½" and 6" sizes. Greater thrust and horsepower capacity, versatile modular construction, other advantages. National Rubber Machinery Co. (191-C)

ELECTRIC PACKER. 6-page illustrated folder describes multiple-speed electric counter and packer that features variable-speed, rotating, counting disc; adjustable tilt table; two independent vibrators. Complete information, average production schedule charts, other data. Fairchild's Inc. (192-C)

CARTONING AND CASE PACKING. 20-page illustrated folder describes the machinery and equipment designed for cartoning and case packing of such items as beverages, drugs, foods, and sundries, and other items. R. A. Jones & Co., Inc. (193-C)

SIX-PACK BEVERAGE CARTON. 4-page folder describes features of new carton to provide greater visibility of beer cans for packaging in six-pack cartons. Packaging Corp. of America. (194-C)

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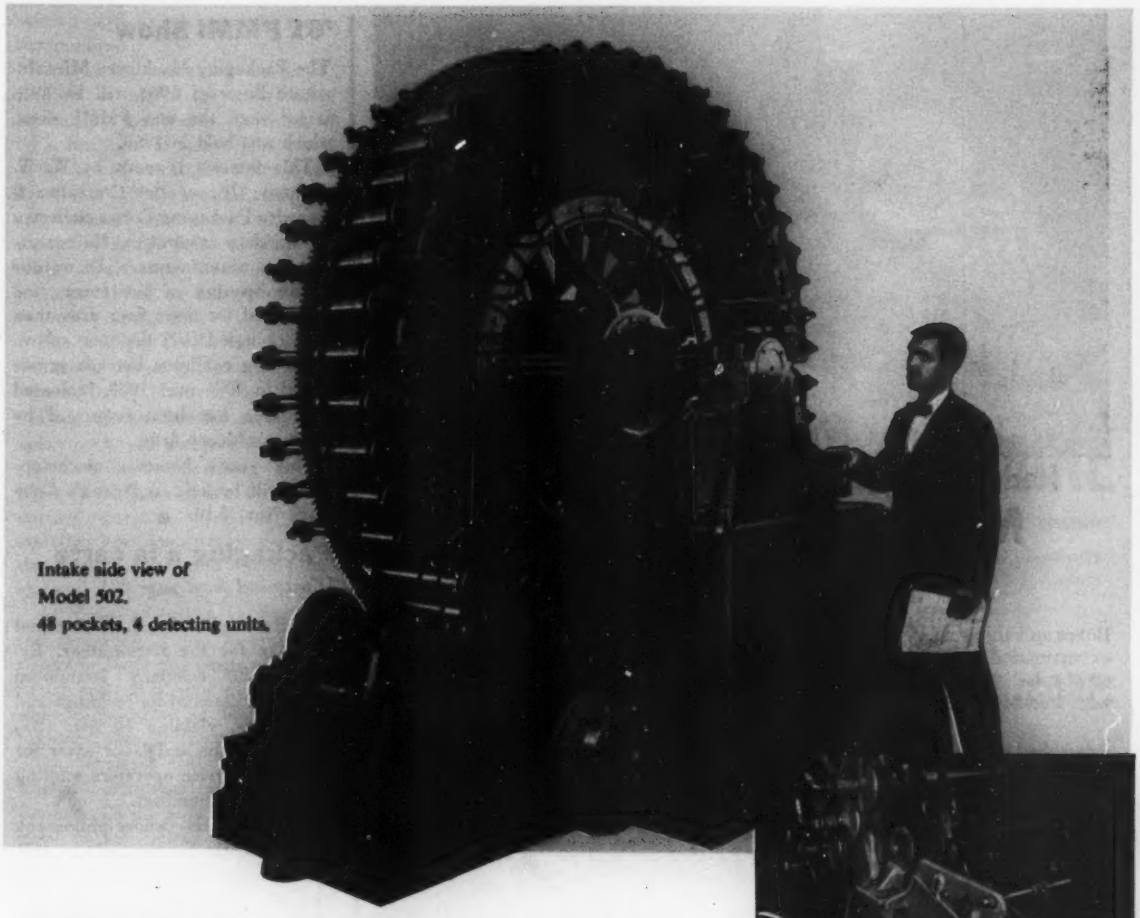


Intake side view of
Model 502.
48 pockets, 4 detecting units.

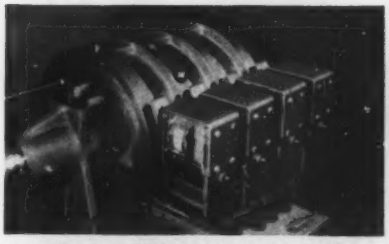
New design concept in can air testers assures new sensitivity, new accuracy in can testing

Discharge side. Bronze clamp fingers, controlled by Memory Drum, carry acceptable cans to upper discharge chute. Integral adjustment features permit rapid changeover for all can sizes within machine's range.

This entirely new Hamilton design concept of automatic can air testers marks a distinct departure from any previously built by B-L-H. It combines new sensitivity with speed in detecting and rejecting cans with minute side seam leaks, end seam leaks, pinholes, and no bottoms.

Sturdily constructed of finest materials, both Models 502 and 501 Air Testers embody many features resulting from a continuing program of research and development. Among these are a retractable cam locking ring which provides easy access for maintenance of gears and valves, detection monitoring by visual annunciators, and integrated adjustments, coupled with engineering design that expedites part changing for different can sizes.

Bulletin 3606-R gives complete details. Write for your copy today.



Memory Drum sequences trip-pins on discharge turret. Four-detecting-unit design employs optimum utilization of Memory Drum, which combines all sequencing of discharge functions into one easy-to-service unit.

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Boxes and shipping containers of fibre or corrugated materials can be stitched or stapled faster, more dependably with free-flowing Mid-States Stitching Wire. Never clogs stitching head because it has no raw edges; never flakes. Comes in 5, 10, 25 and 50-lb. coils.

Furnished flat and shaped in all standard sizes (special sizes available), with galvanized or coppered finish.

5-lb. Spools Packed 10 Spools per carton.

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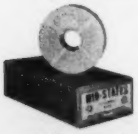

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STITCHING MACHINES in a variety of models also available from Mid-States. Head sizes range from 12 to 36 in.; capacities up to 375-point (⅜") board; with Electric Solenoid Trip if desired. Lease or sale agreements available.

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For binding and reinforcing bales, bundles or boxes.

Strapping in wide variety of gauges, galvanized or coppered, in quantities from 5 to 500 pounds.

Machines on lease or sale agreements.

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'61 PMMI Show

The Packaging Machinery Mfrs. Institute Show of 1961 will be 40% larger than the last PMMI show, which was held in 1959.

This forecast is made by W. W. Anthony, Jr., of the Crompton & Knowles Packaging Corp., chairman of the show committee. He reports that 173 manufacturers, 10 months before opening of the event, had contracted for more floor area than was occupied by the last show. While the exhibitor list has grown less than 10% over 1959, increased floor area has been requested by many machinery firms.

This year's biennial machinery show will be held in Detroit's Cobo Hall, Nov. 7-10. ●

Packaging a la carte

[*Continued from page 88*]

measure to yield 1 gal. of prepared products for the restaurateur. Recently, the company introduced larger packages of its puddings and pie fillings, yielding 10 qts. (2½ gal.) as a time and labor saver for those food-service operators wanting larger batch quantities.

General Foods—whose philosophy is to introduce a new package only if it offers something extra in the way of convenience—recently took another step in making its institutional Jell-O packages easier to use.

The uninitiated may be surprised to note that package sizes differ within the line of Jell-O desserts and pie fillings for the restaurant trade. Why? Because contents, which vary considerably in density, product by product, are metered so that batch preparations in all instances require simply the addition of *one gallon* of milk. A gallon measure is standard restaurant equipment. Even untrained workers understand this.

Jell-O graphics, too, are aimed at easy and errorless directions. Imitation fruit flavors are identified on the packages with small line drawings of the fruit that has been imitated—an essential identification device for packages handled by kitchen employees who cannot read English.

On its No. 10 cans of dehydrated mashed potatoes, GF portrays visually with line drawings the three quick steps in preparation—boil in water, drain, whip in an electric beater. A second panel carries a complete table showing the yield in

serving portions related to the quantity required.

Functional packaging design is credited as one of the contributing factors in the steady increase of GF's institutional sales. This phase of operations was signally recognized five years ago when GF commissioned one of the country's top-notch industrial design firms to work virtually as a partner in a continuing program aimed at improving institutional packaging.

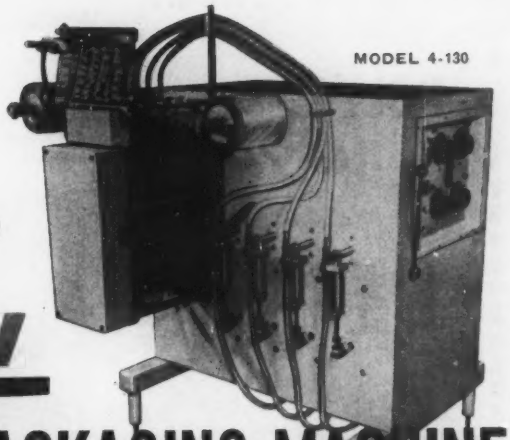
The Borden Foods Co. has announced expansion of its institutional line of convenience items.

Each of the Borden products is being packaged with ease of preparation in mind, designed on the basis of findings under actual restaurant operating conditions. Much attention has been given to packages that are space savers in refrigerators and storage areas.

All firms, of course, do not have the resources of the biggest companies to study the needs of institutional customers—but all have the same opportunity to find out the problems through their sales forces.

An example of a successful smaller institutional supplier is the Renaire Corp., a Springfield, Pa., meat packer selling upwards of a million pounds a month. Renaire has won an enviable reputation for its packaging of quality cuts of frozen steaks and chops, and hamburger patties of accurate weights, which it supplies under the brand name of Tru-Cut in 5-lb. cellophane-overwrapped window cartons with polyethylene-film separations inside between each cut. The see-through packaging was adopted after customers complained about opaque packages that didn't reveal contents. The institutional packages are sold to hospitals and other institutions where accurate portion control is of the utmost importance to prevent charges of favoritism among patients.

Like all other packages, the institutional package must protect the product, be easy to use, easy to store, provide all essential data about contents, tell quickly and graphically how to prepare it—and, when needed, offer menu suggestions that will help food-service operators to attract more customers. The more the package lives up to these prerequisites, the more likely it is to be a leader behind the scenes in the nation's successful eating places. ●



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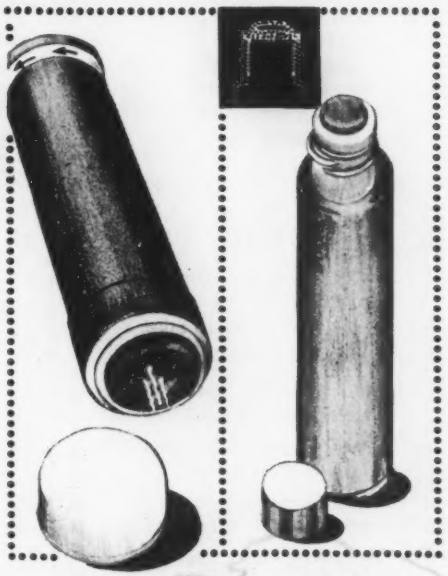

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Northland manufactures **POLYCLEER® BAGS** by the millions under quality controlled production.

All sizes—gauges—styles—shapes
Plain and printed, 1-2-3-4 colors

"You can be positive if it's POLYCLEER®"

Wire, phone, write for price quotations or package counsel.

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Winners in First Irish Packaging Competition

Growing interest in packaging throughout the world is evidenced by the recent announcement of award winners in the First Irish Packaging Competition, sponsored by the Irish Packaging Institute, Dublin.

The Supreme Award, presented for the best package in the contest, went to W. & A. Gilbey's, Ltd., for a distinctive barrel-shaped pottery container for its Irish whisky. The container, designed by Design Research Unit, London, was manufactured by Wade Potteries of England.

For the best pack designed and produced in Ireland, D. E. Williams, Ltd., received the Glenabbey Award for the packaging of its Tullamore Dew whisky. Graphic design of the glass bottle's label has a contemporary appearance, while the carton reflects Old Ireland.

Ireland's best: Supreme Award winner in first Irish Packaging Competition is W. & A. Gilbey's Irish whisky barrel (right). Glenabbey Award went to D. E. Williams' Tullamore Dew package.

Ninety-three firms submitted entries in the competition. Twenty-three awards were made in 10 specific categories, while five packages received special commendations. ●

Food Additives Law seeks an 'open end'

[*Continued from page 89*]

materials "granted an extension to March 6, 1961, and where necessary studies were started prior to March 6, 1960, and have since been pursued with reasonable diligence."

Also, the retiring HEW Secretary wanted to retain the right to terminate extensions at any time if it were found that such an extension "should not have been granted in the first place, or that by reason of a change in circumstances the basis for the postponement no longer exists, or that there has been a failure to comply with a requirement for submission of progress reports or with other conditions attached to the postponement."

The generality of these terms and the latitude which they give F&DA officials leave packagers and suppliers little room for comfort.

However, the F&DA move for an "open end" on testing had just about killed any chance for a rival bill by industry with broader provisions, according to Washington experts. F&DA is advancing the idea that any debate might stir up "anti-additive" members of Congress and delay any legislation until too late.

There is precedent for the "open-end" provision in the Color Additives Amendment, which passed the last Congress. F&DA published on Jan. 24 proposed procedural regulations for this law and allowed 30 days for comment. There is provision for referral to an advisory committee in case of dispute over the Delaney cancer clause. The deadline for final enforcement of this act is within the discretion of F&DA.

F&DA also has wide latitude on enforcement of the new Hazardous Substances Labeling Act, which was scheduled to be effective Feb. 1. On Jan. 31 F&DA announced that it was extending the effective date to Aug. 1, except for a few products which it identified as highly toxic and flammable. The act provides for further extensions as far as Aug. 1, 1962, at the discretion of HEW. Its basic requirement is simply the use of a prescribed cautionary label. ●

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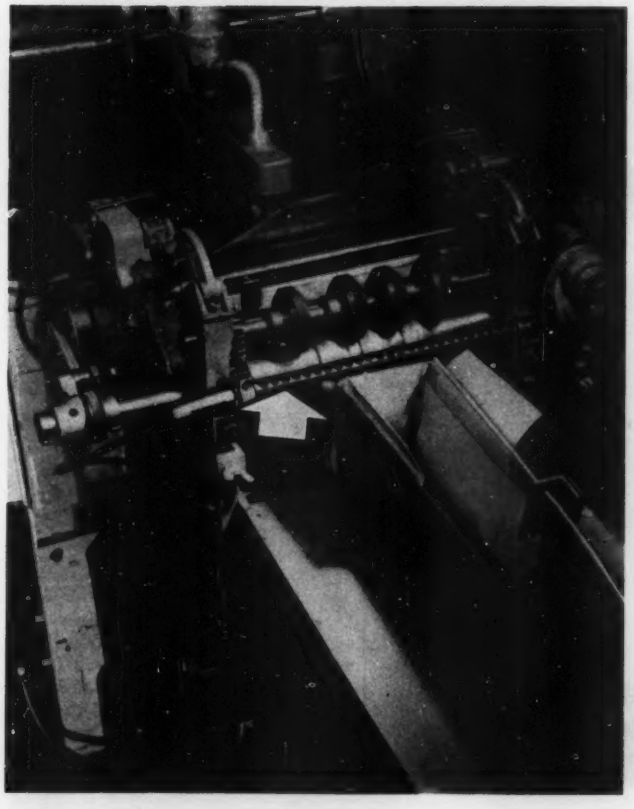

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PRODUCT LABELER

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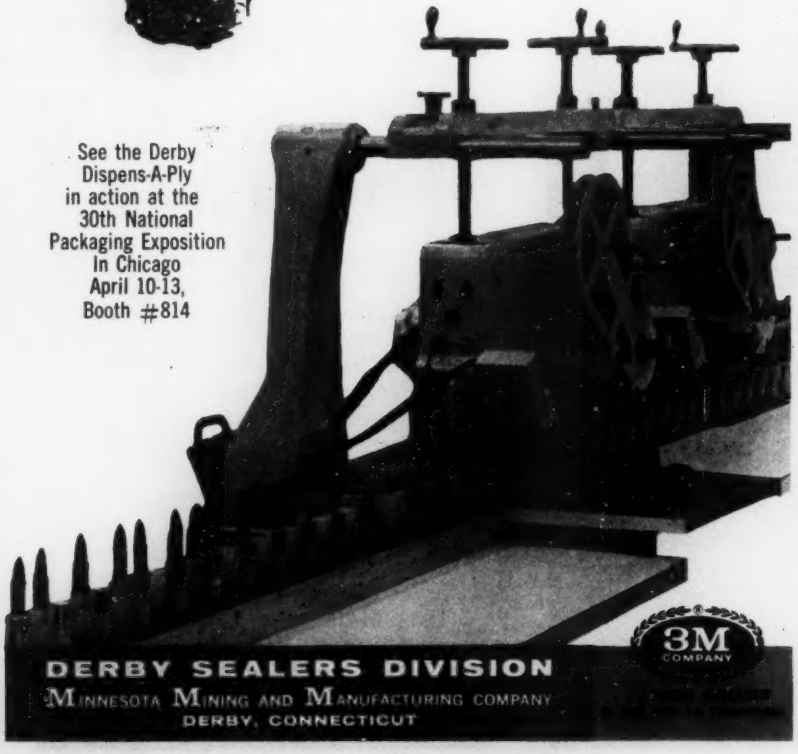
with Pressure-Sensitive Labels . . .
Dispensed and Applied

Automatically

The flexibility of the Derby Dispens-A-Ply Product Labeler is demonstrated by many diverse field installations. A cosmetic manufacturer identifies the color shade of lipsticks on the containers with pressure-sensitive labels . . . a meat packer labels products of many shapes and sizes with a single installation . . . a candy manufacturer labels film wrappings for boxed confectionery . . . distributors price-label nationally-known products . . . and there are many other examples of sale-price labeling, premium deal labeling and special offers requiring spot labeling . . . all applied with the versatile Derby Dispens-A-Ply.

See the Derby Dispens-A-Ply in action at the 30th National Packaging Exposition In Chicago April 10-13, Booth #814



3M COMPANY

DERBY SEALERS DIVISION
MINNESOTA MINING AND MANUFACTURING COMPANY
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AMA Show April 10-13

In a new exposition hall, McCormick Place on Chicago's lakefront, the American Management Assn.'s 30th National Packaging Exposition will open its four-day run Monday, April 10. Also under the same roof will be concurrent sessions of the National Packaging Conference, usually staged in hotels some distance from the show.

A sell-out group of 350 exhibitors will display their materials, equipment and services in 160,000 sq. ft. of space, the total capacity of the new hall. Rated by AMA as the largest exposition in its history, this year's 30th annual show is expected to attract 30,000 visitors during its 33 hrs. of display.

Opening each day at 10 a.m., the show will close Monday, April 10, at 6 p.m., Tuesday at 9 p.m., Wednesday at 6 p.m. and Thursday at 4 p.m.

A visitor registration fee of $2 will be continued this year. Rapid registration tickets to be filled out in advance to expedite entry to the show may be obtained from the show managers, Clapp & Poliak, Inc., 341 Madison Ave., New York 17, or from exhibitors.

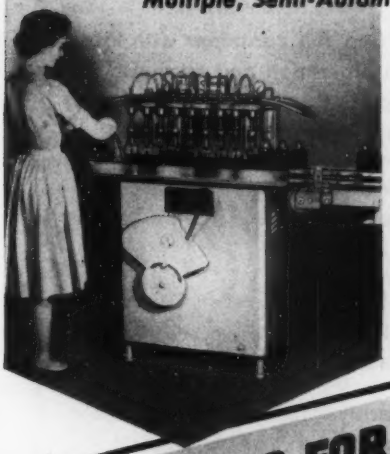
Conference sessions have been scheduled for mornings only, to minimize interference with show attendance. Monday sessions will start at 9:30 a.m., Tuesday and Wednesday at 9 a.m.

All conferences will end at 12:30 p.m., with luncheon sessions from then until 2 p.m. Member fees that also admit to the show are $40 for all sessions, or $10 for individual sessions, and slightly higher for nonmembers. Luncheons are $7 each. Registration blanks may be obtained from the Packaging Division, American Management Assn., 1515 Broadway, New York 36.

Assistance in making hotel reservations is being provided by the Chicago Convention Housing Bureau, 134 N. LaSalle St., Chicago 2. ●

CORRECTION: In a recent news item describing Kimble Glass Co.'s Optiseal Stopper Vial for liquids, powders or pills, the container body was reported to be made of clear plastic (see "Tamperproof, Resealable Vial," MODERN PACKAGING, Jan., 1961, p. 46). Although the container's one-piece closure is molded of polyethylene, the vial itself is made of glass. ●

Multiple, Semi-Automatic Filler



MODEL B-49
STRAIGHTLINE
VACUUM FILLER

Fills 4 to 9 containers simultaneously. Lever engages and disengages filling stems, otherwise operation is automatic. Adjustable for container heights up to 14". Stainless steel construction; plastic available. Discharge conveyor optional. Write for "Bulletin B-49."

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- *Fully Automatic*
- *Semi Automatic*
- *Hand Fillers*

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YOU CAN spark your entire packaging operation with the right filler. Anything short of that can snarl your packaging pace. With a half century of experience in liquid filling, our engineers can specify filling procedure that will head your packaging operation most economically. Our recommendations will not obligate you. Please send sample of product, a dozen containers of each size to be filled and advise desired filling rate per minute, hour or day. Address our home office.

Steady Filling

MODEL B-2 VACUUM FILLER. Fills 2 containers while 2 filled containers are being removed and 2 empties loaded. Thus, filling is continuous. Handles containers up to 4½" dia., up to 13" high. Stainless steel construction. Plastic available. Portable. Filling is fast, efficient. Write for "Bulletin B-2."

For All Liquids All Containers

Also for foamy products that do not permit agitation. Stainless steel filling tubes. Fill controlled automatically. Glass lined tank. No power required. Product supply regulated. Write for "Siphon Bulletin."

Hand Filler. A precision unit of high quality for efficient filling. Write for "Hand Filler Bulletin."

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specially designed for the
FOOD, COSMETIC and
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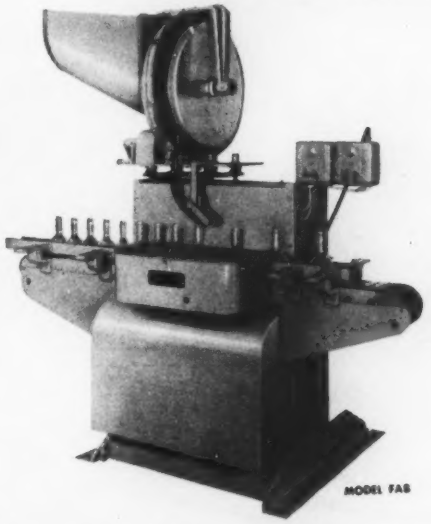
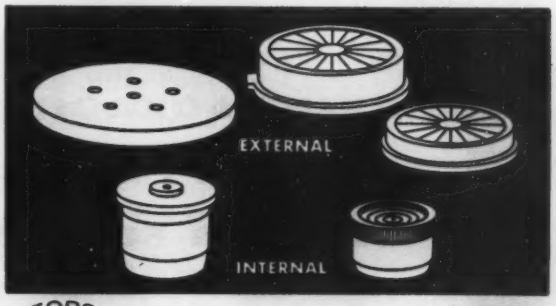


We manufacture Capping machines for every type of fitment . . . solid or perforated with or without tabs for exterior or interior use.

Capacity from 20 to 120 fitments and up to 300 per minute depending on fitment and container.



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The New Airtight Ribbed Aluminium Foil Container

ALU-CUP

The Alu-Cup foil container with internal vinyl protection and hermetic fingertip lid (U. S. patent No. 2738,632) is swiftly becoming the universal retail pack for Cheese Spread. Last year's sale over 50,000,000 cups. Keeps contents fresh for many months in any climate.

Now for the first time available in regular supplies to U. S. dairy produce manufacturers at surprisingly low prices.

4 oz. standard cup readily available. Other sizes from 1 oz. to 5 oz. only a matter of special dies.

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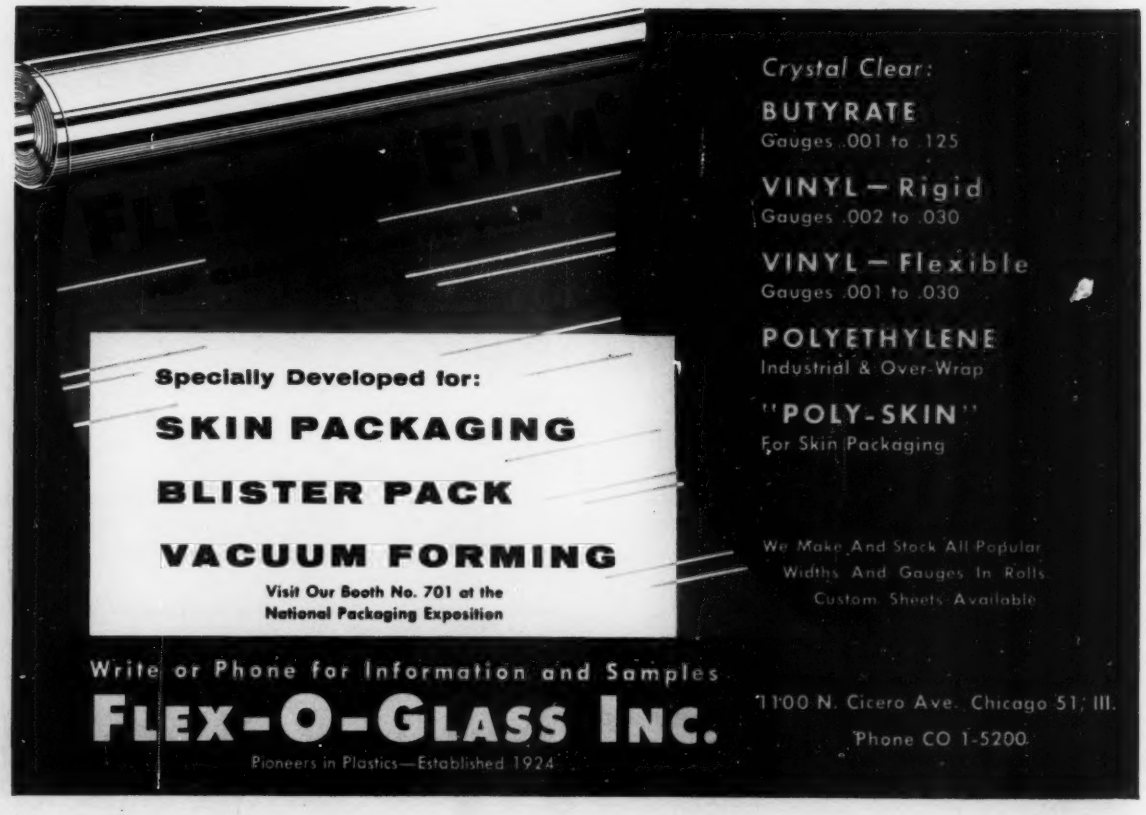

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Best in variety field

A best-of-show award to the Paper Novelty Mfg. Co., Stamford, Conn., for the packaging of its Doubl-Glo Christmas decorations in the 1960 *Variety Store Merchandiser* competition is impressive recognition of the improved design demanded today for even the most popular items.

Doubl-Glo trademark is often printed on transparent wraps so that product shows through as Santa Claus' "beard."

Doubl-Glo was accorded this honor among 52 gold and silver awards, singled out from more than 1,200 entries, the largest number ever entered in this annual event. The Doubl-Glo designs are by Harry & Marion Zelenko Associates. Suppliers are Milprint, Inc.; Duraplastics; Price Bros. Lithograph Co.; New Haven Board & Carton Co., and Stearns & Foster. ●

Rutgers aerosol lab

A laboratory for instruction and research in pharmaceutical aerosols has been opened at Rutgers University College of Pharmacy, Newark, N. J., under the direction of Dr. Louis D. King, pharmacy department chairman.

Equipment includes a pressure-filler mechanism, can and bottle sealer, test-bath and propellant-handling facilities, plus an adjacent sterile-products area.

At a symposium held in connection with the opening of the research facility, important growth for aerosols as a dosage form was forecast because aerosols contribute to stability, sterility, efficient topical application, metered dispensing, safety and convenience. Advances also are foreseen in inhalation therapy based on continuing progress in pressurized packages. ●

WHY TAPE SEALING IS BETTER THAN OTHER METHODS

Tape guarantees customer satisfaction. Tape also builds greater respect for your product.

Product manufacturers who seal their shipping containers with glue or staples overlook resulting customer dissatisfaction in the struggle to get their purchase out of the case. This customer inconvenience can cause:

- Product damage
- Cut hands
- Ripped clothes
- Broken fingernails
- A torn box, spoiled for re-use.

This often causes serious customer aggravation, or even a suit for damages.

The practical and economical way to avoid *all* these difficulties and gain a more dust proof and pilfer proof seal, is to seal with the new "Peelable" or "Strippable" Tapes and have visably extended, convenient lift tabs at both ends, (Pat. Pend.) These Lift tabs are accomplished by a special knife blade exclusive with General Tape Sealers.

WIN CUSTOMER SATISFACTION and
REDUCE PRODUCTION COSTS
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Has "General's" exclusive taping head. NO BRUSHES
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IN CASE YOU CARE—REMEMBER—THIS INTRODUCTORY PRICE GOES UP 15% JUNE 1 1961
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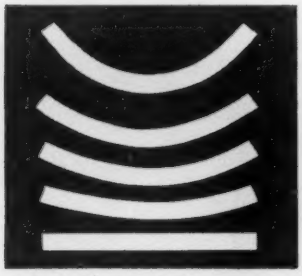
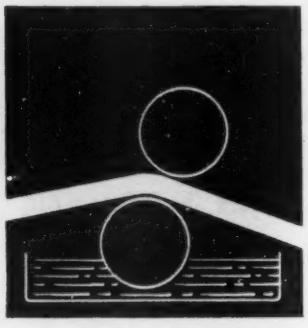
New chemical speeds-up labeling and packaging operations by controlling paper curl.

STAB-U-CEL, a patented chemical that dimensionally stabilizes paper, has met with bright, initial success as a cure for paper curl. Stab-U-Cel penetrates into the paper, effectively locking the cellulose molecules in place. They cannot expand or contract although normal sorption continues. Paper does not curl.



Any degree of curl control can be provided by variations of Stab-U-Cel's concentration from 2% to 50%. Usage ranges from "kiss" application on one or both sides for outer fiber layer stabilization to immersion and thorough penetration for total dimensional stabilization. Stab-U-Cel can be easily applied in an aqueous solution.

Packaging Applications include coated and laminated papers. Both converters and paper mills employ Stab-U-Cel to provide curl controlled end papers. In addition, Stab-U-Cel is effectively used in many specialty paper fields . . . including photographic and reproduction papers, backing and release papers, paper cores, and other applications where curl problems exist in paper and cellulose fiber materials.



Other physical characteristics such as strength, sizing, softness, etc., can be controlled by additives or modifications of the Stab-U-Cel solutions.

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Libby redesigns

[*Continued from page 101*]

single expense. Labels are changed periodically for all products, but this was the first time that Libby had ever altered shipping-container design for all products at one time.

Not all food retailers will want or be able to tray stock, Libby realizes. Smaller retailers who prefer to continue stocking their shelves a few cans at a time can discard the entire shipping container as usual. They will find the new can labels fully salesworthy, Libby believes.

One advantage of tray stocking is that when shelves are partially emptied, stockmen need not bring all remaining cans forward individually, but can simply turn the tray around to present a solid face.

A drawback has been, in most cases, that cans not individually placed are usually faced at random and conventional can designs have only a single selling face. This is overcome in the new Libby label by giving almost equal strength to the "back" label.

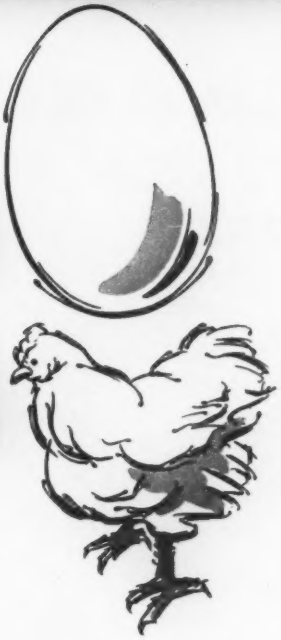
Only the recipe copy, at the very bottom of the back label, is hidden when the cans are tray stocked. However, Libby believes (1) that most recipes are read at home after purchase and (2) that shoppers who do read them in the store habitually remove the can from the shelf first.

Designwise, labels for all Libby canned fruits now carry an illustration of the fruit as it grows, with leaves and stem. The drawing complements the product-in-use illustration, which remains dominant. This technique is used for fruits only. Libby decided that vegetables and meats are too unattractive in their natural state to appear on labels.

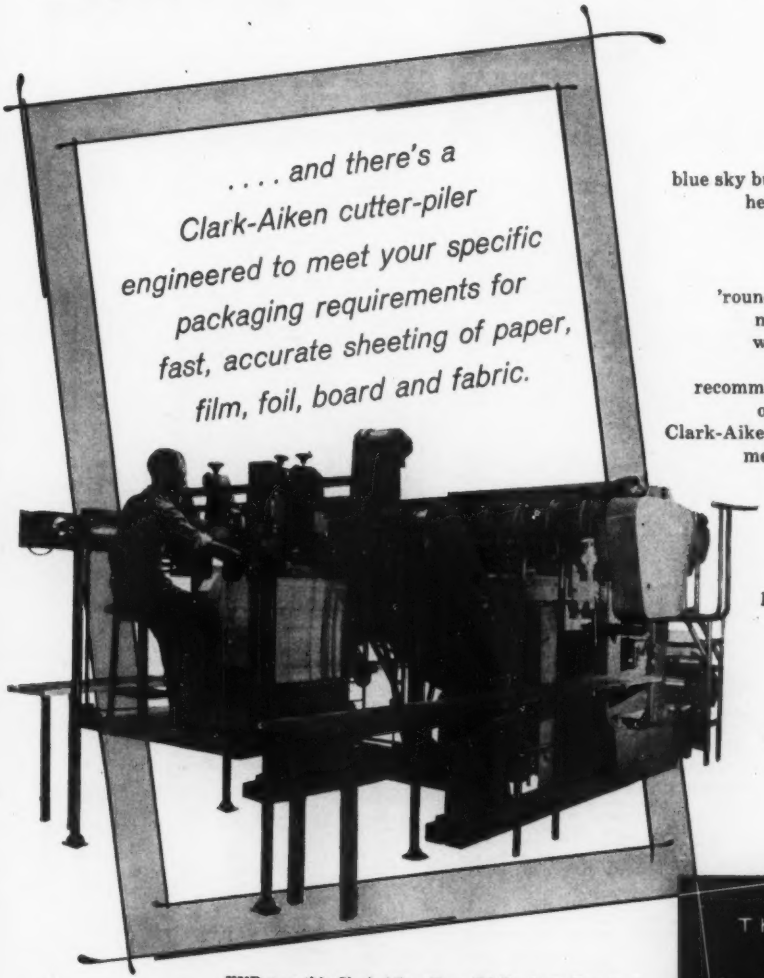
The company's well-known royal-blue triangular symbol has been lightened somewhat on the first labels, to a shade that is considered more compatible with the delicate-colored fruits.

As to tray packaging, Libby management sums up its philosophy in one sentence: "We're selling service as well as goods." The company believes that with packaging completely oriented to tray stocking (but without any handicap in conventional shelf display), it can best meet the convenience and display needs of all retailers, in line with changing store practices. ●

THE perfect package REQUIRES precision equipment



. . . . and there's a Clark-Aiken cutter-piler engineered to meet your specific packaging requirements for fast, accurate sheeting of paper, film, foil, board and fabric.



KVP uses this Clark-Aiken Type DS Register Sheeter to precision cut light bond, gift wrapping, waxed paper, laminated foil, parchment, and for multiple sheeting ham wrappers.

Creative packaging may start as a piece of blue sky but Clark-Aiken precision sheeting equipment can help make the dream a reality—and with increased production at lower operating cost.

Clark-Aiken designed equipment produces 'round-the-clock finishing room service with minimum maintenance and complete cutting accuracy. And when you consult Clark-Aiken engineers on your particular sheeting problems you get qualified recommendations that are based on an extensive study of your needs and shop conditions. Each piece of Clark-Aiken equipment is engineered from the ground up to meet those needs, whether it is for a fully equipped finishing room or one machine to meet a specific sheeting requirement.

Clark-Aiken's practical approach to finishing room automation will help your packaging meet the test of the market place. The result is low maintenance, high speed production machinery that cuts and controls costs.

Why not learn how Clark-Aiken experience and equipment can help improve your packaging profit picture by consulting Clark-Aiken today.

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PNEUMATIC SCALE 4 HEAD automatic capper. Parts for 4-8-16 oz. round bottles. 24-400 cap. Adjustable cap slide. Good running condition. Reasonable. Reply Box 305, Modern Packaging.

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SALES MANAGER—DENVER TERRITORY . . . development, promotion and sales of new product now being introduced to the Industrial Packaging Field. Sales experience in packaging required, preferably strapping, cordage, tape, etc., with good background in distributor relations. College background preferred. Thorough training will be given. Heavy travel initially. Must be willing to relocate and live in Denver. Interested applicants should contact: Recruitment Manager, American Viscose Corp., 1617 Pennsylvania Blvd., Philadelphia 3, Penna.

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MANUFACTURER'S REPRESENTATIVE WANTED . . . to sell packaging equipment. Established firm now branching out into new territories. Sensational, flexible type of heat sealing equipment for sealing vacuum form blisters. Wonderful opportunity for proper sales organization. Write to box #302, Modern Packaging . . . for more detailed information, or contact us in booth #166 in Chicago at the National Packaging Exposition on April 10-13, 1961.

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ENGINEERS MECHANICAL - CHEMICAL: Procter & Gamble has attractive opportunities for Mechanical and Chemical Engineers in its expanding Packaging operations. This involves work in all divisions of the Company in the areas of Soap, Food, Cosmetics, and Paper products. There are also opportunities for staff positions in our Overseas Packaging operations, with opportunities for travel and individual independent action. The work involves management of the design and development of new packages and packaging concepts from their inception to full production. Packaging experience desirable but not essential. This is a unique opportunity to acquire a broad knowledge of the Company's products and all phases of Company operations, and a consequent opportunity for well qualified men to grow into positions of higher management. Send letter in confidence outlining education, experience and salary desired to: Dr. G. L. Foote, Dept. M Research & Development Dept., Ivorydale Technical Center, The Procter & Gamble Company, Cincinnati 17, Ohio.

POLYETHELENE SALESMAN AND REPRESENTATIVE. To handle quality line of polyethelene bags, drum and box liners. All territories open, commission basis. Kobi Bag, 169 Franklin Ave., Brooklyn, New York. Mrs. Gottlieb.

PACKAGING ENGINEER: An excellent opportunity exists in our newly-created Engineering Dept. for an experienced Packaging Engineer. Major duties include package design improvement, package equipment development, packaging layout, machine design and new facility planning in packaging. Substantial experience in above areas desired; analytical and creative ability essential. Management potential. M.E. degree; 10 years' experience. Salary commensurate with qualifications and experience. Liberal fringe benefits; 35-hour week. In reply, state background, age and salary requirement. Reply Box 306, Modern Packaging.

Miscellaneous

NEED AN ART DEPARTMENT in the New York area? Not practical for you to maintain a full-time design department in the East? Let our twenty years of experience serve you on a job basis, a monthly or yearly retainer basis. Roughs, comps, color-separated or composite B&W's. Reply Box 304, Modern Packaging.

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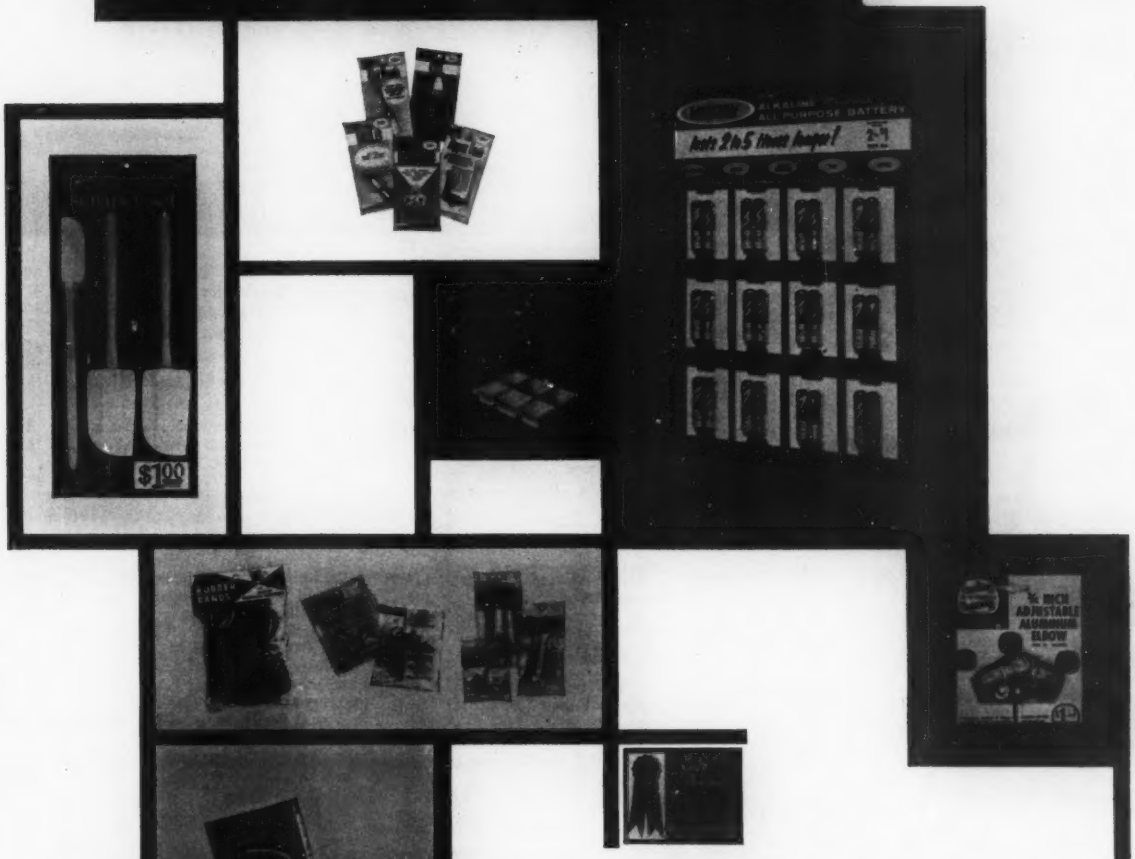
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Send for free fully illustrated kit containing data on Skin, Blister and Flexible Film Packaging; on Plastic Blisters and Trays, Skin Pak Board and Blister Cards. Write today.

Creative Packages that Sell

We love to win packaging awards . . . It gets us right here. We're happier yet when one of our packages is credited with setting a new sales record . . . because creating packages that stand out from the crowd — packages that SELL is our business.

American is a leading producer of materials for Skin, Blister and Flexible Film Packaging — offering a complete service from package design to installation of custom engineered in-plant packaging lines. Many manufacturers and national merchandising organizations rely on American's contract packaging division to handle their entire packaging operation, or provide extra facilities for special promotions or test market new products.

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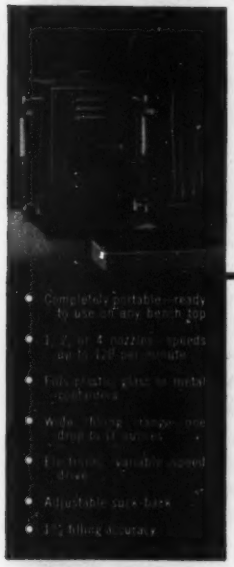

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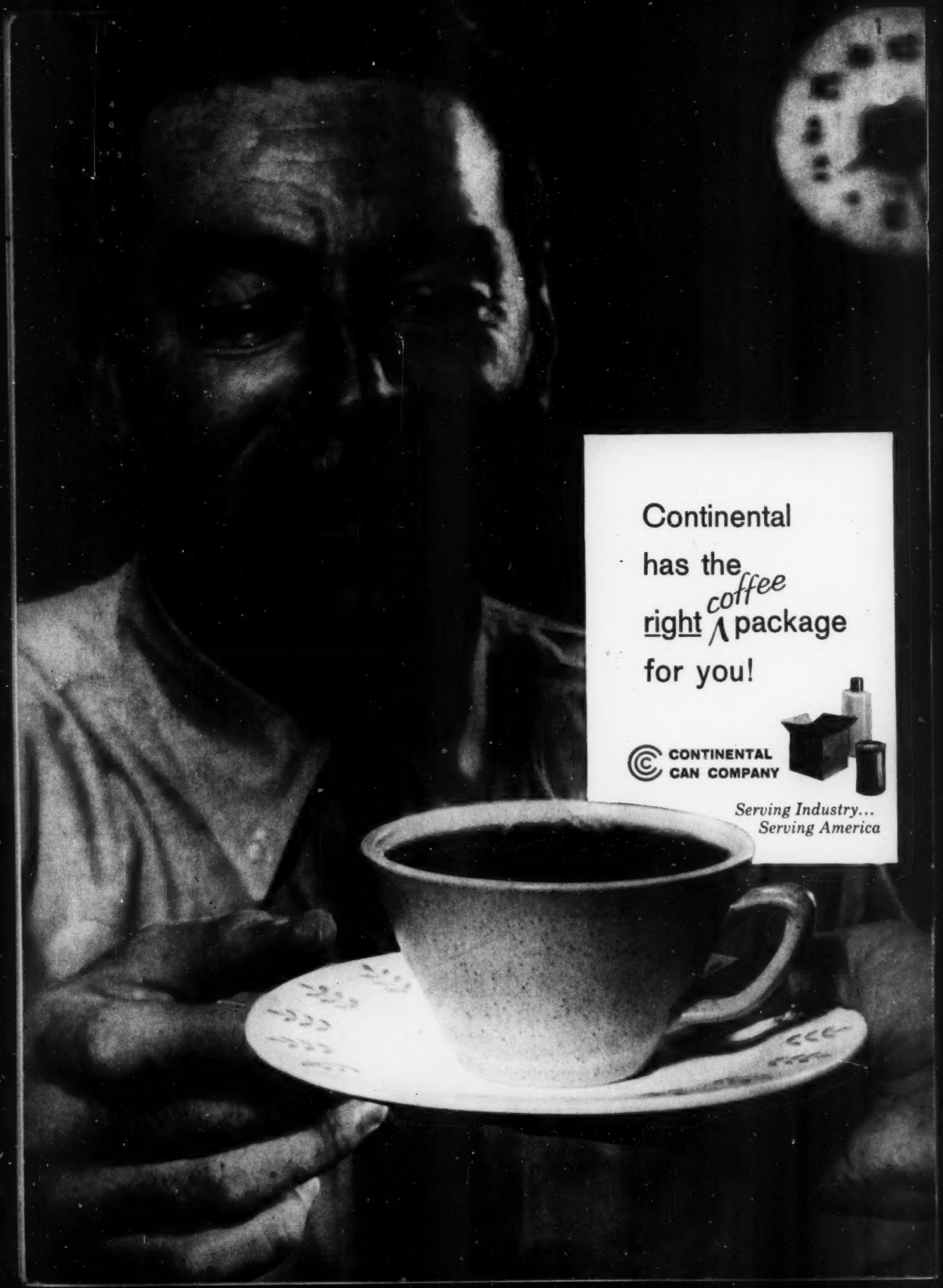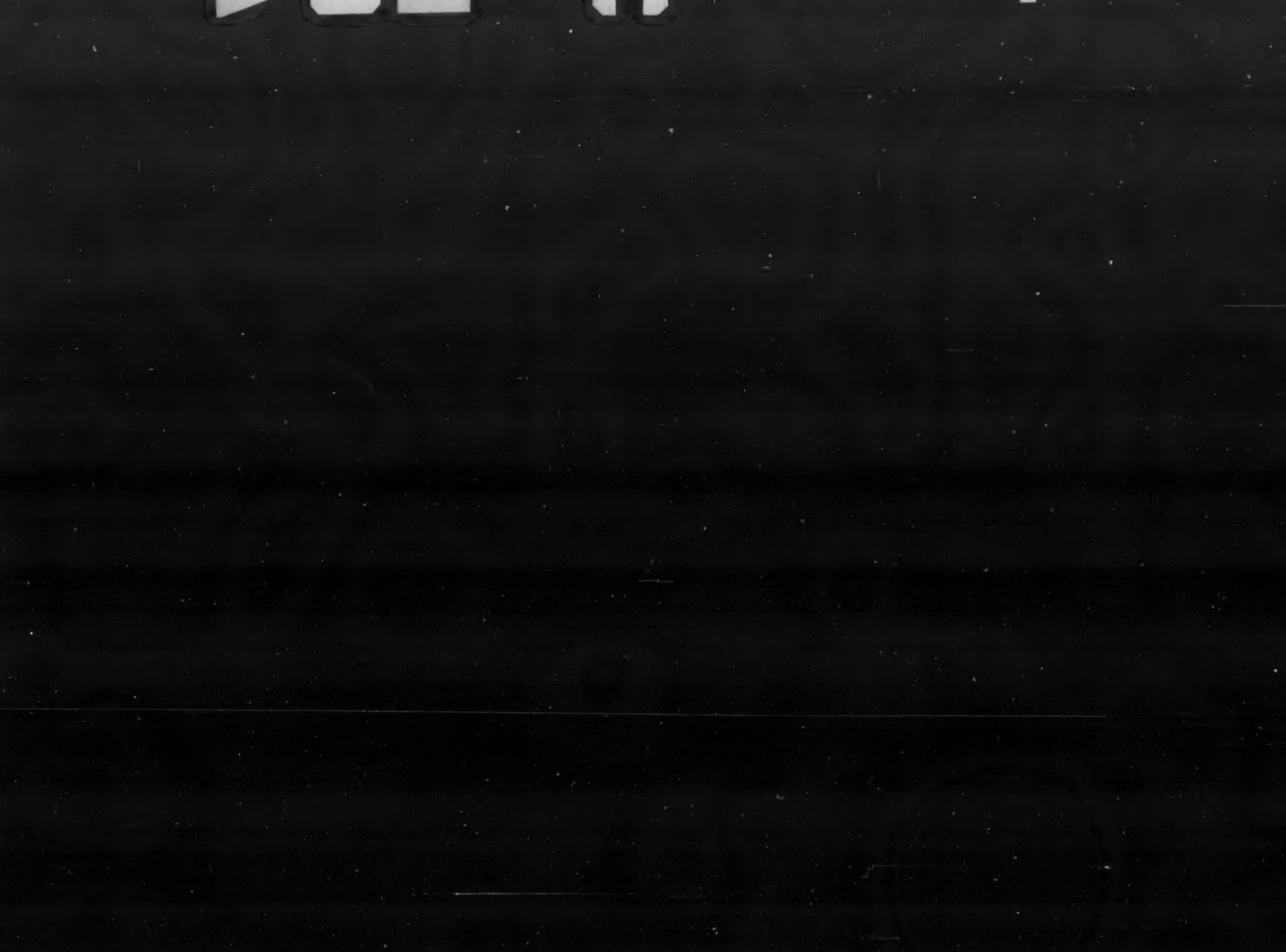
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